



May 6, 2010

Project No. 15210.000

EPA Region 5 Records Ctr.



366090

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Federal Sites Remediation Section
Bureau of Land
Illinois Environmental Protection Agency
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Springfield, Illinois 62794-9276

**Re: Response to Illinois Environmental Protection Agency
Letter Dated March 16, 2010 and Revised Final Demolition Plan
Former Chemetco, Inc. Facility
3754 Chemetco Lane
Hartford, Illinois**

Dear Ms. Rednour:

AMEC Geomatrix, Inc. (AMEC), on behalf of Industrial Asset Disposition, LLC (IAD) and the Bankruptcy Estate of Chemetco (Estate), has prepared this letter in response to the Illinois Environmental Protection Agency (IEPA) and United States Environmental Protection Agency's (U.S. EPA) comments dated March 16, 2010, regarding the previously submitted Demolition Work Plan by AMEC, for the Foundry and Tank House Buildings and adjacent American Air Filter (AAF) System (Demolition Plan), dated December 11, 2009. This letter includes the issues discussed and understandings reached during the project meeting held in Springfield, Illinois on April 22, 2010.

The IEPA and U.S. EPA's comments have been numbered and are restated below in ***bold italics*** followed by AMEC's response in regular font. These responses are reflected in the revised Demolition Plan (attached) and are provided to IEPA and U.S. EPA to facilitate their expedited review of the Demolition Plan. Two versions of the revised Demolition Plan have been provided for your use during document review; a redline/strikeout version showing the text changes made to the December 11, 2009, version and a clean, updated version, with the changes already incorporated.

COMMENTS FROM ILLINOIS EPA:

Site Preparation Activities:

- 1. A number of the plan provisions lack the necessary detail to fully evaluate whether the proposed work will comply with the Interim Consent Order (or proposed Consent Decree) including failing to identify Applicable or Relevant and Appropriate Requirements (ARARs) or to describe how the work will comply with those obligations.***

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AMEC Response: Appendix A of the current Interim Order (IO) provides an ARAR Source List that IEPA recommends for inclusion into work plans prepared pursuant to the IO. These ARARs reference IEPA Regulations 35 Ill. Administrative Code (IAC) Parts 721 through 726 and Part 212. The regulatory references in Appendix A are Resource Conservation Recovery Act (RCRA) Subtitle C requirements and the IEPA identifies these RCRA Subtitle C requirements as suggested ARARs for managing the material associated with the demolition activities at the Chemetco site (Site).

Table 1 of the Demolition Plan provides a more detailed ARAR analysis specific to RCRA-based requirements. It should be noted that the ARARs listed in Table 1 are only specific to the demolition work and until specific remedies for other portions of the Site are identified, ARARs under CERCLA or other RCRA areas cannot be selected and are not proposed in the Demolition Plan. Table 1 and information provided in the responses below include the selected ARARs that are sufficient to safely manage metal bearing materials (MBM) and the waste associated with the demolition activities.

As described in the Demolition Plan, material from the demolition activities varies from MBM that will be reprocessed, to debris piles that contain but not limited to cardboard, wood, metal, plastic, piping, sheeting and a few printed circuit boards. IEPA stated in the April 22 2010, Springfield meeting that the MBM cannot be classified as a by-product or a secondary material. Table 1 has been revised to present the ARARs for the MBM that apply to how the MBM will be handled based on the MBM being previously characterized as hazardous. As discussed in the meeting, the MBM will be relocated and staged during the demolition phase and is not considered "generated" as a result of such relocation and staging. Circuit boards that are encountered will be pulled from the debris pile and sent off-site for shredding and recycling. A waste determination/identification will be made for the remaining debris for disposal. Table 1 lists the appropriate ARAR for these elements.

As discussed in the meeting, IAD nor its contractors will dispose of the MBM in order to carry out the demolition. The ARAR for the MBM depicts how it will be managed while stored at the approved locations on-site awaiting reprocessing. In addition, other ARARs are noted in Table 1 that are specific to waste separate and apart from the MBM.

Table 2 of the Demolition Plan is a debris (in contrast to a MBM) handling matrix. The debris materials listed on this table will be collected and disposed of off-site. As noted in Table 2, and based on previous disposal of this material by the Estate, the only waste in this debris handling matrix previously considered characteristically hazardous is the paper and cardboard.

2. *The plan does not comport with the guidelines applicable to Work affected materials (WAM). In accordance with the Interim Order, there is to be no consolidation of materials associated with the work performed under this plan with existing materials.*

AMEC Response: Efforts will be made to minimize handling and relocation of black slag materials present within the proposed work area. Slag that requires relocation will be moved to open slab areas and kept separate from other existing stockpiles. Such relocation of black slag materials will not be considered WAM under the IO. Other MBM collected from the Foundry and Tank House Buildings will be stockpiled in the Fines Building (please see the Response to

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Comment # 20). MBM present within the Dome Building will be relocated to the Dust Injection System (DIS) Building (please see the Response to Comments #6 and #10). None of the MBM relocated to the Fines Building or the DIS Building consistent with the Demolition Plan shall be considered WAM under the IO.

3. *Further, under Section V General Provisions, 5. Commitment to Proper Management of the Facility, The Trustee shall manage the Facility in accordance with this Interim Order and in accordance with all plans, standards, specifications, and schedules set forth in or developed in Work Plans approved by the State, pursuant to this Interim Order.*

AMEC Response: One of the goals of IAD and the Estate in providing the Demolition Plan and this response to the Demolition Plan comments is to have the approved Demolition Plan be the governing document with regard to performance of demolition covered by the Demolition Plan. Note that, while the Demolition Plan is being submitted in the Estate's name under the IO, the actual work will be managed by IAD working in close communication with the Estate's on-site personnel. It is our understanding that, once the revised Demolition Plan is approved, performance of the demolition activities consistent with the revised Demolition Plan satisfies the IEPA's requirement that "*The Trustee shall manage the Facility in accordance with this Interim Order and in accordance with all plans, standards, specifications, and schedules set forth in or developed in Work Plans approved by the State, pursuant to this Interim Order*" without the Estate or Trustee needing to refer to any other previously approved plans to determine whether the demolition is in compliance with the IO. The movement of MBM consistent with the Demolition Plan shall not result in MBM becoming WAM under the IO.

4. *The trustee shall manage all Work Affected Materials as if it were a RCRA Hazardous Waste in accordance with the hazardous Waste regulations.*

AMEC Response: This is a unique demolition project requiring the relocation of MBM. As explained in the Demolition Plan, much of the MBM will be relocated on-site in order to safely and efficiently demolish the structures. The long term plan for this material is for it to be reprocessed on-site to reclaim the metals from the material. While some of the material has been documented as characteristically hazardous, neither IAD nor its contractors will dispose of the MBM relocated in order to carry out demolition.

Accordingly, regardless of the definition of WAM in the IO, movement of MBM consistent with the Demolition Plan and these comments does not trigger any RCRA requirements other than those specified in Table 1 and is, therefore, consistent with the IO.

5. *While we understand that Work Affected Material resulting from these activities may be used in planned processing activities, the plan does not describe how those materials will be identified, how and when they will be incorporated into the processing schedule or what their disposition will be if found to be unsuitable for processing. The plan must demonstrate that retention of these materials will benefit the Estate and not become a lingering problem.*

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AMEC Response: Virtually all the MBM present at the Site can be processed into commodity products and sold, which will eliminate costly off-site landfill disposal. The only items that will be unsuitable for processing are deleterious non-MBM and debris that is screened out of the MBM stream. These items will be containerized, sampled and profiled for proper off-site disposal.

Processing work will initially address the finer-grained MBM presently located in various buildings on-site, followed by larger accumulations located in bunkers and stockpiles. As discussed during the April 22, 2010, meeting in Springfield, it is anticipated that scrubber sludge accumulations will be processed over the course of the next 1 to 3 years in the following approximate order:

- Scrubber sludge present in the DIS Building (approximately 5,000 tons), including material relocated from the Dome Building during demolition activities;
- Fine-grained scrubber dust to be collected from the Foundry, AAF, Bag House and Tank House Buildings during pre-demolition Site preparation activities and relocated to the Fines Building (approximately 4,000 tons);
- "Super Sacks" within the former Receiving Building (approximately 200 tons); and
- Scrubber sludge present within the Zinc Oxide Bunker (approximately 55,000 tons)

Once the majority of finer-grained MBM is processed, collection and processing efforts will then focus on fine and coarse black slag deposits present at the Site. Thus, the benefit to the Estate is that the Demolition Plan allows the MBM, which is presently scattered throughout the facilities targeted for demolition, to be stored in much more stable conditions until the MBM becomes a raw material stream for the Estate for the processing work described above. Movement of the MBM necessary to perform demolition safely in accordance with the Demolition Plan as modified by this response to the Demolition Plan comments will make the MBM considerably less of a "lingering problem" than it is today. Thus, regardless of the definition of WAM in the IO, the fact that MBM is moved to carry out demolition safely shall not trigger any RCRA requirements other than those identified in Table 1 and IAD and the Estate respectfully requests written confirmation of same through approval of the revised Demolition Plan in a form consistent with these comments.

6. Section 2.2, paragraph 6 states: the metal bearing material present in many areas of the proposed demolition work areas will be collected, consolidated, and temporarily stored on-site during the demolition phase to more safely allow many of the former structures to be demolished in preparation for on-site processing activities.

The plan does not fully describe how those materials will be collected or the ARARs applicable to such activities. The plan does not define what is meant by "consolidated", where or how that will be done or the ARARs applicable to such activities. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan does not fully describe how those materials will be temporarily stored or the ARARs applicable to such activities.

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AMEC Response: Please see the Response to Comment #20. The term “consolidated” as used in the Demolition Plan, means to gather and collect like materials from more than one place within a specific building or area, since they need to be relocated, and stockpiled together at a new location on-site in order to safely and effectively conduct the pending demolition. In general, the MBM that is gathered during demolition will be stockpiled separately from existing piles on-site, except for the MBM present within the Dome Building that will be relocated inside the adjacent DIS Building. The scrubber sludge that is broadly dispersed within the Foundry and Tank House Buildings, along with MBM that is present in the AAF ducting and Bag House structures, will be gathered and safely moved to the Fines Building for temporary storage for future processing. The MBM will be gathered with equipment appropriate for the task at hand (as described herein) depending on the quantity present within a given area, and its location, including but not limited to, the ground or slab surface, building structural beams, inside equipment, ducting or structures, or present on elevated floors or walkways. Generally, large accumulations on the open ground, floor or slab surfaces will be collected with heavy equipment such as a loader, bobcat or backhoe and placed inside a closed top bin for transfer to the Fines Building where the closed top bin will be dumped (emptied on the floor slab) and the material will be pushed into a single stockpile and stored in bulk. Residual quantities remaining after collection with heavy equipment will be gathered by sweeping, shoveling and/or vacuuming. This MBM will also be transferred to the Fines Building. MBM present on the horizontal surfaces of interior building structural members will be collected by vacuuming then transferred to a bulk container for relocation to the Fines Building. There may be certain instances, such as close quarter areas, that limit or prevent access of construction equipment, and material there will be collected with a mini vacuum and placed into a Super Sack instead of a covered bin for handling purposes. It is anticipated that this “close quarter” handling would be done on a very limited basis.

Personnel handling MBM capable of becoming airborne will wear Level C personal protective equipment (PPE) during collection, handling and stockpiling activities. Please see Table 1 with respect to ARARs for this element.

7. Section 3.1, bullet point 11 states: Collect slag materials and small stockpiles located on the slab surfaces in proposed staging areas and adjacent to structures proposed for demolition and consolidate it on-site with like materials in existing stockpiles for future processing activities.

The plan does not fully describe how those materials will be collected or the ARARs applicable to such activities. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan must be revised to fully describe how those materials will be temporarily stored and the ARARs applicable to such activities.

AMEC Response: As stated in Section 3.1, Bullet 11, and more specifically in Section 5.4, paragraph two, the large open slab area to the west of the Dome Building will be useful for staging of decontaminated steel proposed for off-site salvage, or other collected debris placed in bins or gathered in temporary piles for off-site disposition. Numerous small slag piles placed within this area by Estate personnel within the past 5 years limit the available space for material staging.

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As discussed with IEPA personnel during the Site tour on March 30, 2010, the small stockpiles west of the Dome Building will be gathered with a loader and transported to a different location on a portion of open concrete slab and stored for future processing. Locations will be selected that are not within active work zones or travel paths for heavy equipment movement. These areas include, but are not limited to, the northeast corner outside of the existing DIS Building, and other unoccupied areas to the west and north of the present piles. Relocated slag would be placed outdoors on a portion of open and unoccupied concrete surface slab and kept separate from any other slag material. As discussed during the April 22, 2010, Springfield meeting, locations where slag will be relocated will be inspected and the surface slab condition will be photo-documented prior to placing the relocated slag material directly on the concrete slab, without perimeter berms or cover, in an area that does not pond or accumulate storm water. The date the slag was relocated, the original and new locations and the approximate quantity of material would all be documented and material locations would be noted on a Site figure.

Please refer to Table 1 for the proposed ARARs for this task.

8. Section 4.0, paragraph 4 states: Metal Bearing Materials that are collected and handled as part of the demolition work will be stored in a contained and controlled manner. If during demolition work it becomes necessary to relocate stockpiles of materials (ex. Slag pile blocking dock at Dome Building), they will be relocated to stockpiles of similar materials and in a manner that does not increase the potential for release from the Site.

The plan does not fully describe how those materials will be collected or the ARARs applicable to such activities. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan must be revised to fully describe how those materials will be temporarily stored and the ARARs applicable to such activities.

AMEC Response: Please see the Response to Comment #7. As discussed in the April 22, 2010, Springfield Meeting, the structures where the material will be staged and stored will not meet the substantive requirements under 40 Code of Federal Regulations (CFR) Part 265 Subpart DD requirements for containment buildings or the §262.34 management standards for accumulation of hazardous waste nor will the administrative requirements such as permits be met given that this Site was recently listed on the National Priority List by EPA and on-site actions do not require RCRA administrative requirements such as permits, recordkeeping and reporting nor is compliance with other administrative requirements necessary for on-site actions (See, e.g., "RCRA ARARs: Focus on Closure Requirements," OSWER 9234.2-04FS (October 1989). That guidance at page 1 states that "On-site actions do not require RCRA permits, nor is compliance with administrative requirements necessary for on-site actions." Also, page 2 of that guidance states that "Administrative Requirements....include the requirement for preparing contingency plans....recordkeeping, and consultations." During the demolition, compliance with the appropriate substantive requirements only as specifically noted on Table 1 will be met. Documentation that will be collected is described in Response #7.

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- 9. Section 5.4, paragraph 3 states: Slag and metal bearing materials that are present within the proposed demolition work zone and adjacent staging areas will be collected and consolidated with other existing larger piles of similar composition until they can be processed on Site under procedures to be described in a subsequent Slag Processing Work Plan.**

The plan does not fully describe how those materials will be collected or the ARARs applicable to such activities. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan must be revised to fully describe how those materials will be temporarily stored and the ARARs applicable to such activities

AMEC Response: Please see the Response to Comments #5 through #7 previously.

- 10. Section 5.5.3 states: Existing piles of scrubber sludge and slag fines present in the Dome Building will be relocated into the adjacent DIS building or with other larger piles of like material, for storage until subsequent on-Site processing can be performed.**

The plan does not fully describe how those materials will be collected or the ARARs applicable to such activities. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan must be revised to fully describe how those materials will be temporarily stored and the ARARs applicable to such activities.

AMEC Response: This comment refers primarily to the MBM present within the Dome Building which will be relocated to inside the DIS Building and stored with other like material there for future processing. The MBM currently present within the DIS Building will be pushed into a stockpile toward the interior walls with a rubber-tired loader to create additional available space for material storage. The newly cleared area of the floor slab in the DIS Building that will receive Dome Building MBM will be swept and visually inspected, and slab conditions will be documented as previously described in Response to Comment #7. If large cracks are present that fully penetrate to the underlying surface they will be sealed with material similar to that used in the recent Brick Shop Closure work. The MBM in the Dome Building will then be moved with a loader and placed in a separate stockpile inside the DIS Building yet directly adjacent to the existing DIS Building MBM. For safety purposes, this relocation work will not be performed until after the collapsed roof is removed from the Dome Building.

Please see the Response to Comment #1 and Table 1 with respect to ARARs.

- 11. Section 5.5.3, Wet Decontamination Facility - No material from the Dome Building may be moved to any other area of the Chemetco Facility other than the DIS Building. No fines from the Dome Building may be stored outside. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan must be revised to fully describe how those materials will be temporarily stored and the ARARs applicable to such activities.**

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AMEC Response: Please see the Response to Comment #10.

12. Section 3.6, paragraph 2 states: A portion of the AAF area is subject to additional cleanup measures as described in the work plan titled "RCRA Closure Plan, AAF Decontamination Area and Sump, January 31, 2008." Prior to commencing with the proposed AAF demolition activities, the remediation objectives described in the RCRA Closure Plan associated with cleaning the slab and sealing the sump in this area will be implemented and documented, so the space will be available as useable working and lay-down areas during the subsequent demolition activities there. The closure documentation associated with the RCRA Closure Plan will be submitted to the IEPA along with other demolition related completion documents at the conclusion of the demolition activities described in this Plan. The Estate considers approval of this Work Plan to be approval of a modification of the IO consistent with the discussion in this paragraph.

The work performed pursuant to the RCRA Closure Plan, AAF Decontamination Area and Sump shall be certified as complete in accordance with the Interim Order Section XIII. Certification of Completion, paragraph 46. Completion of Work Plans. The Certificate of Completion shall be obtained prior to demolition of the AAF Area.

AMEC Response: As discussed with IEPA, U.S. EPA, and Estate personnel during the Site tour on March 30, 2010, and again during the April 22, 2010, Springfield meeting, remedial actions including pumping accumulated storm water in the work area to the north Polishing Pit, washing the slab three times, sealing the storm water sump, sealing of holes and/or deep cracks that extend through the complete slab thickness, and documentation of these actions will be performed in the AAF area. This information will then be compiled into a closure submittal by Estate personnel and submitted to IEPA for review and acceptance at the same time that demolition close-out documentation is also provided, at the completion of the proposed demolition work. IEPA personnel would visually inspect the work for completeness relative to the remediation objectives prior to submittal of any closure documentation by the Estate. This approach has been summarized in Sections 3.6, 5.7, and 8.0 of the revised Demolition Plan.

13. The work performed pursuant to the RCRA Closure Plan, AAF Decontamination Area and Sump shall be certified as complete in accordance with the Interim Order Section XIII. Certification of Completion, paragraph 46. Completion of Work Plans. The Certificate of Completion shall be obtained prior to demolition of the AAF Area.

AMEC Response: Please see the Response to Comment #12. With respect to ARARs the area is identified in the RCRA Closure Plan as a former sump and decontamination area. As described above and recently discussed during the April 22, 2010 Springfield meeting, the closure activities will be performed in the AAF at the completion of demolition activities, but prior to contractor demobilization. Based on the RCRA Closure Plan approach and the demolition there is likely to be some slag and sludge fines associated with sweeping and cleaning of the slab areas, along with wash water from the slab pressure washing and spent PPE. The wash water will be collected and containerized with other decontamination water from the demolition and the MBM will be swept up from the slab area and relocated to the Fines Building.

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Determination of whether the generated material and wash water is a RCRA hazardous waste is required under 40 CFR §261.11. This ARAR is listed in Table 1.

- 14. Section 5.7 AAF Decontamination Area and Sump, paragraph following item 6 states: Once the AAF Decontamination area has been cleared and the sump is sealed, the AAF decontamination area and sump will be open and available to the contractor without restriction for staging and/or lay down of equipment or other.**

The work performed pursuant to the RCRA Closure Plan, AAF Decontamination Area and Sump shall be certified as complete in accordance with the Interim Order Section XIII. Certification of Completion, paragraph 46. Completion of Work Plans. The Certificate of Completion shall be obtained prior to demolition of the AAF Area.

AMEC Response: Please see the Response to Comments #12 and #13 previously.

- 15. Section 8.0 Record drawings and Closure/Completion Certification states: Within 45 days of completion of demolition and waste disposal activities and receipt of all disposal records, a completion report will (be) prepared and submitted to IEPA that includes information regarding the RCRA closure documentation associated with the AAF Decontamination Area and Sump.**

The work performed pursuant to the RCRA Closure Plan, AAF Decontamination Area and Sump shall be certified as complete in accordance with the Interim Order Section XIII. Certification of Completion, paragraph 46. Completion of Work Plans. The Certificate of Completion shall be obtained prior to demolition of the AAF Area.

AMEC Response: Please see the Response to Comment #12 through #14 previously.

- 16. Section 6.0 Demolition Activities, paragraph 1 states: Demolition activities will be performed by a licensed environmental demolition contractor under contract with IAD. Demolition activities will include removal of above ground piping, ductwork, and above ground storage tanks (ASTs) located within the demolition zone, removal and salvage of furnace ovens located in the Foundry Building, followed by demolition to slab grade of the Foundry, AAF, Baghouse and Control Room, Restroom, and Hydraulic Bailer Room, management of decontamination-derived materials, debris handling, and debris disposition and recycling.**

Please state that all interior decontamination of the Foundry Building, the management of decontamination-derived materials, and debris handling, and arrangements for debris disposition and recycling will be made prior to the removal and salvage of furnace ovens located in the Foundry Building.

AMEC Response: The interior and exterior of the AAF, and the interior of the Tank House and Foundry Buildings, will be decontaminated prior to performance of any demolition activities, including furnace removal within the Foundry. As discussed during the April 22, 2010, Springfield meeting, the general approach is (1) collect and remove MBM and other debris from the building interior, (2) clean the building interior, (3) perform abatement activities as

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necessary, and (4) demolish the structure. Arrangements will be made for disposition of demolition debris in a timely manner, although certain items may possibly be present on site awaiting shipment when the furnace removal work is performed.

Decontamination-derived materials may include decontamination water and spent PPE. Please refer to Table 1 for ARAR-specific information.

17. Please provide the name of the Site Safety Supervisor to the IEPA prior to the start of the demolition.

AMEC Response: Comment noted. The name of the Site Safety Supervisor will be provided to IEPA prior to the start of demolition.

18. Section 4.5 General Recordkeeping: Please provide the names of all contractor, subcontracts and employees. Include records of the amount of OSHA and EPA training each employee has received.

AMEC Response: Comment noted. The names of demolition contractor personnel have already been provided to the Estate per the requirements of the Seal Order. Additional records consistent with the above comment will be provided to the Estate prior to the start of demolition and maintained onsite.

19. Section 5.4.4 Metal bearing materials, such as the furnace feed material in the Foundry Building, must be repackaged in containers that are in good condition prior to being moved out of the Foundry Building. Once removed from the Foundry Building the containers must be stored in secured location (i.e., inside under cover).

The plan does not fully describe how those materials will be collected or the ARARs applicable to such activities. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan must be revised to fully describe how those materials will be temporarily stored and the ARARs applicable to such activities.

AMEC Response: The former furnace feed materials that cannot be processed on-site during pending metals processing work will be transferred to Department of Transportation (DOT)-approved shipping containers inside the Foundry Building during the performance of debris collection activities. Heavy equipment such as a Bobcat, fork lift, and/or a backhoe will be used during the transfer of these materials to new containers. The material transfer work area will be dry and free of other MBM. After transfer is complete, any residual feedstock material associated with the transfer will be swept or vacuumed up and placed within the shipping container. These repackaged materials will be sealed and labeled and will remain temporarily stored inside the Foundry Building until they are shipped off-site to yet-to-be-determined buyers of smelter feedstock materials such as these.

The ARAR that applies to management of these MBM is listed in Table 1.

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20. Section 5.6 Collection and Consolidation of Scrubber Sludge Dust – Collected dust must be managed in a tank or container. It is proposed to transport the fines to Fines Building. The Fines Building is a three sided building that is exposed to the elements. This building already contains a large amount of slag and slag fines. The plan must fully describe how those materials will be collected and the ARARs applicable to such activities. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan must be revised to fully describe how those materials will be temporarily stored and the ARARs applicable to such activities.

AMEC Response: Please see the Response to Comment #6 for a discussion regarding the collection of MBM present in the Foundry and Tank House Buildings. The Site received extensive rainfall this past year. The interior of the Dome and Foundry Buildings are flooded during wet winter months due to collapsed or missing roof areas and doorways that remain open year round; MBM present there is exposed to the elements including wind and precipitation. Although the Fines Building is open on one end, the interior remained relatively dry all winter as compared to the other buildings in question that presently contain MBM.

The Fines Building consists of 6,000 square feet (ft²) of covered area, with a concrete floor and concrete perimeter walls extending approximately 10 feet above slab grade. The remaining vertical side walls consist of steel siding. The roof is a steel truss covered with steel skin, with an interior height of approximately 20 feet at the highest point. As of March 21, 2010, five or six small piles of scrubber sludge totaling approximately 50 cubic yards (CY) or less was present in the Fines Building.

Based on preliminary volume estimates there is approximately 2,000 CY of MBM from the Foundry and Tank House Buildings that will need to be collected, relocated, and temporarily stored until it can be processed. All of this material is suitable for processing and it is anticipated that it will be in storage greater than 90 days until it can be processed on-site.

If this material were to be stored in Super Sacks, we estimate that approximately 700 CY (or 700 Super Sacks) could be safely placed in a double-stacked layer covering 90 percent of the useable floor space. There would still be an additional 1,300 Super Sacks that would require indoor storage. Presently the Receiving Building contains 100 Super Sacks of scrubber sludge and is full. Volume estimates indicate the 2,000 CY of MBM from the Foundry and Tank House Buildings can be stored in bulk in a single stockpile inside the building. The pile would cover the floor from concrete wall to concrete wall, while not allowing the upper portion of the material stockpile to be placed in direct contact with the vertical wall steel siding. The use of Super Sacks, tanks, or vessels for storage is an inefficient use of the available space in the Fines Building for indoor secure storage, will cost more, and will require more material handling effort. IAD would propose to enclose the open end of the building with a wood frame covered with corrugated fiberglass siding or other like material, to provide additional containment and protection from the elements once the material is placed there. In addition, the new wall would contain a doorway to allow access of construction equipment, and a small rounded asphalt curb would be placed on the slab across the doorway to prevent potential storm water run on from entering the building.

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Please refer to Table 1 for ARAR-specific information for storage and management of this material.

21. Section 5.9 Hazardous Building Material Survey – This survey identified mercury switches, fluorescent bulbs and PCB ballasts. This waste does not meet the definition of household hazardous waste. These materials are fully regulated by 35 IAC 721 – 809. The plan must be revised to describe the proper handling and disposition of such materials.

AMEC Response: Mercury switches and fluorescent bulbs identified in the Hazardous Building Material Survey (HBMS) will be managed as universal wastes. These materials will be handled, managed, and properly disposed of following 35 IAC 733, Subparts B and D.

The quantity of light ballasts within each building was noted in the HBMS survey prepared by Geotechnology, Inc. Their report assumed that each light ballast identified was polychlorinated biphenyls (PCB)-containing, and the condition of the light ballasts identified were assumed to be intact and non-leaking. Non-leaking PCB light ballasts do not meet the definition of a special waste but are considered a municipal solid waste. Non-leaking PCB light ballasts will be managed as a municipal solid waste following 35 IAC, Subtitle G.

22. Section 6.3 Foundry, Baghouse and Control Room demolition – There is no mention on how the large amount of zinc oxide that is in the baghouse and baghouse collection trailer will be managed. The plan must fully describe how those materials will be collected and the ARARs applicable to such activities. There cannot be any consolidation of materials associated with the work performed under this plan with existing materials. The plan must be revised to fully describe how those materials will be temporarily stored and the ARARs applicable to such activities.

AMEC Response: Access holes will be cut into the 12-foot diameter air collection manifold duct (main duct) on top of the Foundry Building to allow entry and cleanout of the main duct. Using specialized equipment and personnel and in accordance with confined space procedures, the contractor will push any residual standing dust remaining in the main duct to the southern end of the manifold where it will then drop down into the main reservoir. An access opening will be cut in the main reservoir where the contractor will utilize a super sucker (dry vac) to remove the material and vacuum it directly into DOT hazardous-certified close top roll-off bins. The clean out of the main reservoir and trailer will be conducted within the confines of each unit which will minimize fugitive dust during the clean out. Once the reservoir is empty, the screw conveyors at the bottom of the trough will be removed to allow access to the bags for vacuuming and collection of residual dust in the bags. Once the bags have been emptied out, the snap rings will be cut, and the bags will be folded/collapsed into the hopper to control dust.

The bags will be collected at the bottom of the hoppers and placed into DOT hazardous-certified closed top bins for characterization and disposal.

Please refer to Table 1 for ARAR-specific information.

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23. Any Concrete generated as a result of any demolition activity may not meet the definition of Clean Construction or Demolition Debris (CCDD). All concrete must be sampled for total metals prior to crushing and reuse as fill on-site or disposal and/or transport to an off-site concrete recycling facility. IAD must obtain approval from the IEPA before classifying any concrete as CCDD, using the material as on-site fill or sending the concrete off-site.

AMEC Response: Buildings and structures proposed for demolition will be removed down to the top of the existing slab, leaving the slab and other concrete structures intact. Concrete slab, footing, foundation, pony wall, or other potential underground structure removal work is not proposed or anticipated to be performed during the pending work described in the Demolition Plan.

It is anticipated that the only concrete debris generated will be associated with the former lead-lined concrete electrolytic cells in the Tank House Building. No other concrete slabs or foundations are scheduled to be demolished at this time. Existing concrete debris piles present at several locations around the Site will be left undisturbed, and will not be recycled or disposed off-site at this time. Visually impacted concrete (i.e., stained or discolored) from the electrolytic cells is not anticipated to be recycled on-site. It will be placed in a temporary stockpile for waste profiling purposes. Concrete that does not appear visually impacted will be placed in a separate pile. Representative samples of each pile will be obtained and analyzed separately for total and toxicity characteristic leaching procedure (TCLP) metals for waste profiling purposes prior to shipment off-site for recycling or disposal. Analytical results will be relayed to IEPA personnel via telephone for approval to ship concrete off-site. Concrete debris with analytical results that are below the Tiered Approach Corrective Action Objectives (TACO) Tier 1 Industrial/Commercial Standards for soils may be left in a pile on site for future use as clean fill.

Please refer to Table 1 for TACO ARAR-specific information.

24. TABLE 2 – Wood, building debris, plastic and concrete are separate waste streams. Each waste stream must be sampled for TCLP metals prior to off-site disposal. Electronic waste (computer monitors and circuit boards) may not be disposed of at a landfill. These wastes may be considered hazardous wastes when sent for disposal as a solid waste.

AMEC Response: The materials mentioned above will be collected and stockpiled separately during debris collection activities. Circuit boards will be removed from the debris piles and sent offsite for shredding and recycling. Each debris type will be sampled for TCLP metals as applicable prior to disposal. The contractor will make every effort to separate the various debris types and waste streams present at the Site into separate piles. Some debris such as cardboard and paper cannot easily be separated from other material present. The contractor will collect and submit a representative sample from each debris pile to a third party analytical lab for TCLP analysis. The results will determine the waste profile and appropriate off-site disposal options.

Please refer to Table 1 for ARAR-specific information.

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COMMENTS FORWARDED TO ILLINOIS EPA FROM U.S. EPA:

- 25. Sections 2.3 and 5.2: The difference between existing and proposed storm water management and control measures appears to be a silt fence along the southern edge of the facility site. Implementation of the proposed stormwater best management practices (BMPs) should be documented in any reports required by Illinois EPA. Discharges from Outfall #5 must comply with the facility's National Pollutant Discharge Elimination System permit.**

AMEC Response: Comment noted. A revised Figure 5 is included in the Demolition Plan. This new figure will also be incorporated into the facility Stormwater Pollution Prevention Program (SWPPP) maintained by the Estate. The revised Figure 5 shows the diversion and collection features that will be installed at the Site during demolition. SWPPP measures will be inspected weekly and documented on a form and maintained on file at the Site. As discussed with IEPA, U.S. EPA, and Estate personnel during the Site tour on March 30, 2010, storm water that will collect in the two existing sumps on the south fence line will be diverted through an existing 6-inch above ground polyvinyl chloride (PVC) pipe that connects to the Retention Basin. The 6-inch PVC line will be inspected and repaired as necessary prior to being utilized for diversion purposes. If the line is inoperable, collected storm water will be diverted to an alternate collection point and introduced into the concrete manway associated with the perimeter storm water collection system located outside the east fence line, directly east of the cooling canal. Storm water will then discharge in a controlled manner through Outfall #5 under the existing conditions stated in the National Pollutant Discharge Elimination System permit. IAD will also place cobble-sized limestone aggregate along the banks of the south side of the Retention Basin at the present discharge points for purposes of erosion control and preventative maintenance. Water that may accumulate within the AAF area is presently removed via the Main Pump House and either transferred to the former cooling canals or directed to spray irrigation for purposes of evaporation and volume control. Once demolition starts, spray irrigation for volume control will likely cease and any water removed from the AAF area via the Main Pump House will be conveyed to the existing cooling canals.

- 26. Sections 3.3 and 6.7: The proposed demolition plan for the Black Acid Tank Solid Waste Management Unit (SWMU) should meet the substantive requirements for closure under the Resource Conservation and Recovery Act (RCRA).**

AMEC Response: The contractor will remove the steel tank from the building, cut the tank into sections to facilitate handling and send the steel off-site with other scrap steel associated with demolition. Closure activities will be performed, in parallel with other demolition work that will be on-going at the Site under the Demolition Plan, in compliance with 40 CFR §265.197 Closure and Post-Closure Care. The interior of the Black Acid Tank was decontaminated although written verification of this step cannot be found at this time. Chemetco submitted a revised soil sampling plan on September 2, 2000, although it is not clear if the IEPA ever approved the plan. The Estate will prepare a closure work plan for submittal to IEPA for review.

- 27. Section 3.4 and 6.4.3: Regarding disposal of the refractory brick, a determination should be recorded whether this is RCRA hazardous waste produced in the former Brick Shop. It is estimated that 70 tons of this material is on site.**

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AMEC Response: Please note that the refractory brick surfaces that came in contact with molten metals during past facility operations contains many of the target metals proposed for processing separation. This refractory brick can be crushed and processed on site, in a manner similar to other MBM present on site. Any existing spent refractory brick present within the demolition work zone will be collected and stored in an appropriately sized closed top container onsite. Spent refractory brick removed from furnaces will also be stored in closed top containers onsite for subsequent processing with other MBM. The contractor will attempt to remove refractory brick in layers and keep each layer separate from subsequent layers. The outer layers that previously came in contact with molten metals will be stockpiled separately on site for future on-site processing similarly to other MBM. Underlying layers that may not have come in contact with molten metals will be kept separate and tested for waste determination purposes prior to disposition. The underlying non-contact layer that also contains elevated metals will be retained on-site for processing. The refractory brick that will not be retained on-site for processing will be shipped off-site for appropriate disposal.

28. Section 4.3: It is the position of EPA that all work activities at the site be performed in compliance with applicable federal and state Occupational Safety and health Administration regulations for all types of wastes and activities at the site, and the Illinois EPA should review the Health and Safety Plan prior to initiating field activities.

AMEC Response: Comment noted. The contractor's site-specific Health and Safety Plan will be provided to IEPA prior to contractor site mobilization. The noted subject as it applies to ARARs, is occupational exposures to on-site remediation workers. Please refer to Table 1.

29. Section 4.5 and 5.10: Section VI.A.16 of the IO requires shipping manifests be submitted to the State at time of shipment, and the Plan proposes keeping records on site until work completion. This represents a time delay between event occurrence and submitting documents.

AMEC Response: A profile will be generated based on the analysis for disposal at a suitable and certified disposal facility. If required, a sample manifest will be generated based on the profile information and submitted for owner/agency review. At the time of shipment, a signed transporter and generator copy will be forwarded to the State of Illinois for their records. A similar copy will be kept on site and on file during the field operations. A final fully executed copy signed off by the disposal facility will be sent to the owner and a copy will be kept on file at the Site as well as presented in the AMEC report submitted to the agencies at project completion.

30. The Plan does not address demolition methods or impacts on refrigerants or underground structures/utilities/wells that may be encountered.

AMEC Response: For obvious reasons, many traditional building demolition methods such as the use of wrecking balls, or explosives for building implosion, are not an option here given the Site conditions. Demolition methods will consist primarily of the use of large excavators equipped with hydraulic shears capable of cutting or shearing steel beams and other steel supporting structures. Cranes will also be used to lower large components to the ground surface in a safe and controlled manner. Dust controls consisting of water mists and sprays will



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be used to limit fugitive emissions during the performance demolition work that might generate dust. Keep in mind that none of this demolition work will occur until after the MBM is removed from the areas being demolished. As discussed during the April 22, 2010, Springfield meeting and previously stated in Response to Comment #16, the general approach is (1) collect and remove MBM and other debris from the building interior, (2) clean the building interior, (3) perform abatement activities as necessary, and (4) demolish the structure.

Based on discussions with Estate personnel, equipment containing refrigerants was not used or is not anticipated to be present on site. Overhead electrical utilities within the Foundry Building will be relocated prior to building demolition. Gas lines entering the Foundry Building will be shut down and disconnected from the main line prior to the commencement of demolition. Monitoring wells present within the demolition work zone will be located, identified and protected (avoided) by the contractor during demolition work.

If you have any questions regarding these responses please contact me at your earliest convenience. We look forward to receiving IEPA approval to this plan as soon as possible.

Sincerely yours,
AMEC Geomatrix, Inc.

A handwritten signature in black ink that reads "Bryan Stone". The signature is written in a cursive, flowing style.

Bryan Stone, PE
Senior Engineer

cc: Chris Cahnovsky, Illinois EPA
Michelle Kerr, U.S. EPA Region 5
Gary Davis, Estate of Chemetco
Elliott Stegin, Industrial Asset Disposition, LLC

Attachments: Revised Final Demolition Plan (redline strikeout version)
Revised Final Demolition Plan (clean version)



REVISED FINAL DEMOLITION PLAN

Former Foundry and Tank House Buildings and

American Air Filter System

Former Chemetco, Inc. Facility

Chemetco Estate, Hartford, Illinois

Prepared for:

Industrial Asset and Disposition, LLC

Los Angeles, California

and

The Bankruptcy Estate of Chemetco, Inc.

Hartford, Illinois

Prepared by:

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May 6, 2010

Project No. 15210.000

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REVISED FINAL DEMOLITION PLAN
Former Foundry and Tank House Buildings and
American Air Filter System
Former Chemetco, Inc. Facility
Chemetco Estate, Hartford, Illinois

1.0 INTRODUCTION

On behalf of Industrial Asset Disposition, LLC (IAD), and the Bankruptcy Estate of Chemetco (Estate), AMEC Geomatrix, Inc. has prepared this revised final Demolition Plan (Demolition Plan) to describe activities associated with the demolition of the Foundry Building and adjacent American Air Filter (AAF) air pollution control system (AAF System), the interior demolition of the Tank House Building, and demolition of other adjacent small support buildings as described below, at the former Chemetco, Inc. (Chemetco) facility (the Site). The interior and exterior of the AAF, and the interior of the Tank House and Foundry Buildings will be decontaminated prior to performance of any demolition activities, including furnace removal within the Foundry Building. The Site is located at 3754 Chemetco Lane, at the intersection of Illinois Route 3 and Oldenberg Road (now Chemetco Lane), in an industrial and agricultural area of unincorporated Madison County near the southern boundary of the Village of Hartford, Illinois (Figure 1).

The following sections present general information related to project background, regulatory considerations, health and safety, demolition, and disposal activities anticipated to be performed at the site. All work described herein and proposed for the Site will be conducted in compliance with the Interim Order (IO) entered September 16, 2008, in the case of the United States of America and the State of Illinois v. Chemetco, Inc., Civil Nos. 00-670-DRH/00-677-DRH (consolidated) in the United States District Court, Southern Illinois.

Although this Demolition Plan is being submitted in the Estate's name as required by the IO, the actual work will be managed by IAD working in close communication with the Estate's on-site personnel. Approval of this Demolition Plan will satisfy IEPA's requirements that "the Trustee shall manage the Facility in accordance with this IO and in accordance with all plans, standards, specifications, and schedules set forth in or developed in work plans approved by the State, pursuant to this IO", without the Estate or Trustee needing to refer to any other previously approved plans to determine whether the demolition work is in compliance with the IO.

2.0 PROJECT BACKGROUND

The Site consists of a 41.1 acre former secondary copper smelter and includes former processing and support buildings, administrative buildings, and stockpiles of slag and scrubber sludge (Figure 2). The surrounding area is comprised primarily of farmland in agricultural use for the production of corn and soybeans. The State of Illinois Lewis and Clark Visitors Center and Park are across Route 3 to the northwest of the Site.

2.1 PREVIOUS OPERATIONS

The Site was constructed in 1969 and initiated operations as a secondary copper smelter in 1970 to derive copper and other non-ferrous metals and alloys from recyclable copper, lead, and tin-bearing scrap. The Site produced anode copper and crude lead/tin ingots for solder. In the process, large quantities of smelting by-products were generated and stockpiled on site.

2.2 CURRENT SITE CONDITIONS

On October 31, 2001, Chemetco ceased operations. Shortly thereafter, on November 13, 2001, the Site filed for Chapter 7 Bankruptcy protection. The Bankruptcy Court appointed Ms. Laura K. Grandy as the Trustee for the Estate. The Site was subsequently sealed by order of Illinois Environmental Protection Agency (IEPA) on December 4, 2001, to control the access and exposure of personnel to inorganic constituents consisting primarily of lead, copper, zinc, tin, and cadmium, known to be present in the slag, scrubber sludge and dust at the Site. Since the Seal Order has been in effect, the Site has remained virtually unchanged. On March 9, 2010, Mr. Donald M. Samson replaced Ms. Grandy as the Trustee for the Estate.

The Site is fenced, monitored and controlled during business daylight hours by Chemetco Estate personnel. After hours and weekend monitoring is achieved by the presence of a 24-hour security camera monitoring system.

Upon shutdown, large stockpiles of metal bearing materials (MBM) were present at the Site. MBM is defined in the IO as "scrubber sludge, slag, various and sundry smelter feedstocks, 'in-process' materials, sediments, sludges, metal spills and splatters, and dusts associated with former operations at the Facility that contain economically viable and reclaimable concentrations of metals, including but not limited to copper, zinc, lead, tin, and nickel." The IO further stated that MBM are considered to be work affected materials (WAM) defined as "scrubber sludge, slag, MBM, wastes, and substances accumulated on the surface of or within the Facility or Facility assets that are managed, handled, or otherwise dealt with in the performance of work under this IO." However, as discussed herein, by approving this Demolition Plan, IEPA acknowledges that the definition of WAM does not apply to MBM managed in accordance with this Demolition Plan.

Conservative approximate quantity estimates of these products were previously stated in the IO and are summarized below.

Type of Metal Bearing Material	Quantity (Tons)
Black Slag	900,000
Scrubber Sludge	45,000

Portions of the Site contain former process-related features designated by IEPA as Resource Conservation and Recovery Act (RCRA) Solid Waste Management Units (SWMUs). These include several unlined canals that were previously used for management of cooling water and storm water, a concrete-walled scrubber sludge storage area referred to as the Zinc Oxide Bunker, a former black acid above-ground storage tank in the southeast corner of the Tank House Building, and the decontamination area and sump on the south side of the Polishing Pits referred to as the AAF Decontamination Area and Sump.

The IEPA has characterized the MBM as characteristically hazardous due to the concentrations of lead and cadmium present in the materials. As described in this Demolition Plan and discussed in meetings with IEPA, these materials will be relocated and staged in the areas presented in this Demolition Plan during the demolition phase to await reprocessing on site. As required under the IO, applicable or relevant and appropriate requirements (ARARs) have been developed and included in Table 1 of this Demolition Plan for the management of this and other material and/or debris that will be encountered during the project. Such relocation, staging, or movement of MBM for future on-site reprocessing, including black slag and scrubber sludge, consistent with this Demolition Plan, will not be considered WAM under the IO, and does not trigger any RCRA requirements other than those specified in Table 1 and is, therefore, consistent with the IO.

Consistent with the definition of MBM contained in the IO, the metals present within the slag and scrubber sludge are a raw product as related to minerals beneficiation. Given the appropriate application of certain processing technologies, the metal content in the MBM presents an opportunity to allow the slag and scrubber sludge to be safely processed and converted from a waste into a marketable product or commodity. Application of this concept will ultimately allow the Site to achieve a greater future beneficial use.

While this Demolition Plan does not detail the pending processing activities to recycle MBM, as described more fully below, the MBM present in many areas of the proposed demolition work areas will be collected, consolidated, and temporarily stored on site during the demolition

phase to more safely allow many of the former structures to be demolished in preparation for on-site processing activities. The term "consolidated," as used in this Demolition Plan, means to gather and collect like materials from more than one place within a specific building or area, since they need to be relocated, and stockpiled together at a new location on site in order to safely and effectively conduct the pending demolition. In general, the MBM that is gathered during demolition will be stockpiled separately from existing piles on site, except for the MBM present within the Dome Building that will be relocated inside the adjacent Dust Injection System (DIS) Building. The scrubber sludge that is broadly dispersed within the Foundry and Tank House Buildings, along with MBM present in the AAF ducting and Bag House structures, will be gathered and safely moved to the Fines Building for temporary storage for future processing MBM relocated to the Fines or DIS Buildings a consistent with this Demolition Plan, and staged for future on-site processing, shall not be considered WAM under the IO. Collection, relocation, and staging of MBM for future processing is discussed further in Section 5.6.

2.2.1 Storm Water Management and Controls

Several concrete lined ditches, sumps, lagoons, and unlined canals exist within the former smelter facility and were once part of a closed-loop storm water management system operated by Chemetco under IEPA permit number 1997-EO-3853. This closed loop system was previously used in support of smelting activities for the operation of the former wet scrubber system, the slag granulation plant, cooling towers, and process cooling water for the furnaces and casting wheel. Although the wet scrubber, slag granulation plant, and the cooling towers are no longer in operation, according to Estate personnel, the closed-loop system is still used as a component of the Site storm water management. The Estate estimates between 1 and 3 million gallons of storm water is captured and contained within this system. On-site evaporation by means of irrigation water spray nozzles is used for volume control.

Storm water runoff at the Site perimeter from the north and east side of the existing slag piles is currently captured by the perimeter off-site system (a perimeter drain system consisting of 18-inch diameter plastic drain pipe) and diverted to a 1,000,000 gallon retention basin located just across Chemetco Lane, southeast of the smelter property, as shown on the Existing Storm Water Management Plan drawing presented as Figure 3 (this figure was derived from the Estate's existing Storm Water Management Plan). The retention basin was built in 1998 and storm water from the retention basin discharges as overflow through Outfall 005 Storm Water Lagoon, under National Pollutant Discharge Elimination System (NPDES) Permit No. IL0025747. The purpose of the Estate's existing Storm Water Management Plan is to prevent discharge of storm water that falls on the smelter property that exceeds NPDES discharge standards. The Estate currently uses the closed loop system, along with discharge through

the NPDES storm water outfall 005, and natural evaporation measures to manage storm water at the Site. Storm water management during demolition is discussed further in Section 5.2.

3.0 STRUCTURES PROPOSED FOR DEMOLITION

This section presents a general scope of work for demolition activities and then describes the historic use of each building structure within the proposed demolition work area.

3.1 SCOPE OF WORK

The general scope of work for the demolition of the structures described below will include the following activities:

- Prepare, implement, and maintain a Site-specific Health and Safety Plan (HASP);
- Procure all relevant permits and provide required submittals to regulatory agencies;
- Provide and maintain necessary temporary facilities and environmental controls;
- Revise the Estate's existing Storm Water Management Plan to allow controlled discharge of excess storm water from the Site into the perimeter off-site system with eventual discharge that meets current NPDES permit discharge standards.
- Install and maintain storm water controls with best management practice (BMP) measures in active work areas to supplement the Estate's Storm Water Management Plan;
- Establish decontamination facilities to decontaminate steel scrap, vehicles, equipment, and containers removed from the demolition work areas that are going off site.
- Inspect, document, and repair as necessary, the interior walls and floor of the Fines Building and the DIS Building for temporary storage (staging) of MBM for future processing activities that are collected during this work.
- Collect, sort, and recycle, or dispose of various types of scrap, debris, and trash located inside and adjacent to the structures proposed for demolition;
- Decommission certain above ground tank systems, sumps, sewers, electrical equipment, process piping, and related equipment associated with the structures proposed for demolition;
- Collect and containerize scrubber sludge dust from the structures proposed for demolition. This MBM will be temporarily stored (staged) on site in either the Fines Building or DIS Building for future MBM processing activities;
- Collect slag materials and small stockpiles located on the slab surfaces in proposed staging areas and adjacent to structures proposed for demolition and consolidate it

on site (in a pile separate from other existing material) for future MBM processing activities;

- Decontaminate and clean building interiors prior to demolition;
- Remove and abate asbestos containing materials (ACM) and universal wastes that are known to be present in the structures planned for demolition and appropriately dispose of them;
- Demolish the former Foundry Building, Baghouse and Control Room, AAF System, and Restroom Building areas down to slab grade leaving surface improvements (this includes pavements, concrete slabs and footings) in place; slabs would then be pressure-washed and the collected liquids would be included with other decontamination water;
- Demolish the interior contents of the Tank House Building down to slab grade leaving the building structure, interior steel beam mezzanine structures, walls and roof, floor slabs and surface pavements in place; then pressure wash the building interior shell; collected liquids would be included with other decontamination water;
- Decontaminate size as necessary and recycle scrap steel;
- Recycle or dispose of demolition building materials as construction and demolition debris;
- Transport and dispose of non-hazardous and hazardous waste debris associated with general housekeeping and demolition activities per appropriate regulatory guidelines; and
- Provide closure reporting documents and reports specifically identified in this Demolition Plan.

These activities and the structures located within the proposed demolition area are described further in the following subsections.

3.2 FOUNDRY BUILDING, BAGHOUSE AND CONTROL ROOM, AND AAF AIR POLLUTION SYSTEM

The Foundry Building housed the former smelter operations, and is approximately 175 feet wide by 345 feet long (60,375 square feet of area), and about 5 stories tall. The Foundry Building is generally constructed of steel columns and I-beams, with sheet metal roofing and siding, and a concrete floor. The Foundry Building is in general disrepair with visible damage to the roof, exterior siding, and portions of the elevated furnace deck.

The Foundry Building contains four furnaces, a shaker ladle, an overhead crane (not operational), a holding furnace, an anode casting wheel, electrical control center, a hydraulic fluid control center, a large 14 foot diameter roof fugitive dust exhaust pipe on top of the Foundry Building, and furnace air emissions control duct work leading to the emissions

pollution control system (AAF System) on the east side of the building exterior. Numerous containers of MBM that were originally intended as smelter feedstock are located on the west side of the Foundry Building interior along with a furnace shell and several small stockpiles of furnace cleanup solids.

The roof exhaust pipe is connected to a large Wheelabrator Baghouse just south of the Foundry Building. The Baghouse is a large steel structure previously used to remove and consolidate fugitive dust emissions from the furnaces. The Baghouse contains a series of *internal cages and dust collection filters or bags attached to metal cages to remove dust from the air stream by periodic cycles of pulsed air*. Removed dust would then collect in the chutes on the bottom side of the Baghouse for eventual removal.

The AAF System consists of the air handling system and the wet scrubber system. The air handling system contains stainless steel exhaust piping from the furnaces to the AAF System. The AAF System was modified in the early to mid 1990s and consists of two elevated buildings, each containing five Rotofilters (with centrifugal units removed), large uninsulated stainless steel ducts, cyclone separators, and mist eliminators connected to large stainless steel exhaust fans that exhausted to the atmosphere through unlined steel exhaust stacks. The wet scrubber system consists of steel and stainless steel piping and collection containers that transported the wet slurry of emissions particulates (i.e., zinc oxide) that were "scrubbed" from the emissions using a water spray. The slurry was pumped to open concrete lined basins, known as the Polishing Pits, where the particulates settled out into a "scrubber sludge" that was pumped to filter presses in the Tank House Building after an additional step of settling using the old electroplating cells. Excess water from the settling steps and filter presses was pumped to steel tanks next to the Polishing Pits and recycled to the wet scrubbing system as spray water.

The Baghouse Control Room is a small cinder block structure with A-frame roof located between the Baghouse and Foundry Building. All the structures described above are proposed for demolition down to slab grade, leaving the concrete floor slabs in place. The Polishing Pits will be left in place until some future date. The buildings proposed for demolition will never be used again for smelting purposes, are in poor condition, and pose a safety hazard. Three of the four furnaces have salvage value and will be removed and sold for reuse in Europe. The footprint currently occupied by these buildings and structures may be needed for purposes of future MBM processing activities.

3.3 TANK HOUSE BUILDING

The Tank House Building contained equipment used in the final steps of the former smelter operations. Black copper anodes entered the Tank House Building from the Foundry Building where they were immersed in a chemical bath for purification purposes and the resulting

copper cathodes were the primary product of Chemetco. In a patented proprietary process, 99 percent pure copper anodes were transformed into 99.98 percent pure cathodes in the Tank House Building electrolytic cell room.

The footprint of the Tank House Building occupies approximately 52,800 square feet of area (330 feet by 160 feet) and is about 2 stories tall. The Tank House Building is generally constructed of steel columns and I-beams, with a steel truss structured roof and concrete slab on grade. The entire structure is covered with corrugated tin siding, some of which is deteriorated or missing. The interior of the Tank House Building consists of upper level offices, cat walks, stairways, an overhead crane and ductwork, piping, and former refining equipment, such as filter presses and lead-lined concrete electrolytic cells. An electrical room used to convey power into the Tank House Building and a concrete loading dock are present on the south end of the structure.

The Tank House Building is proposed for interior demolition only, leaving the walls, floor, roof, interior structural beams, overhead crane, and mezzanine structural beams of the building intact. The adjacent electrical room and concrete loading dock will also be left intact.

The southeast corner of the Tank House Building contains a former waste acid storage taken referred to as the Black Acid Tank and is considered by the United States Environmental Protection Agency (EPA) to be a SWMU. The Black Acid Tank was decontaminated by Chemetco and a hole cut in the side to render it unusable. Closure was never completed.

The Tank House Building is anticipated for reuse as a processing facility for MBM.

3.4 BRICK SHOP

The Brick Shop is a 50 foot wide by 80 foot long by 20 foot high fully enclosed building attached to the southwest corner of the Foundry Building. The Brick Shop was constructed with sealed-joint concrete floors and 5 foot high concrete walls with steel I-beams and metal siding with a metal truss structured roof. The building has a large electric roll-up door opening on the east and a standard door on the west. There are no drains, sumps, or other pathways for materials to exit the interior of the building except the doors. A former pre-fabrication storage container was previously located in the southeast corner and has been relocated outside on the south side of the building. Former steel racks previously located on the west side of the shop once held several metal refractory-lined chutes previously used to convey molten metal into the smelter. The Brick Shop was originally used to reline these types of chutes and melt pots with refractory brick and mortar.

A portion of the Brick Shop was the subject of limited interior cleanup work as described in the report titled *RCRA Closure Plan, Brick Shop Container Storage Area* (Estate, 2008a).

The remedial objectives stated within the closure plan were implemented by the Estate and according to an Estate employee certification of closure documentation was submitted to IEPA. The Estate received IEPA's written approval in a letter dated March 3, 2010, that the work described in the closure plan has been completed (IEPA, 2010). The Brick Shop will be left intact and is not proposed for demolition at this time. It is anticipated that the building will be used in support of future MBM processing activities that will initially consist of pilot-scale plant processing of scrubber sludge, slag, and other MBM. The metal stand and chutes have been removed for recycling of the steel and potential disposal of the refractory linings. The concrete floor and interior side walls were pressure washed and all waters were collected and containerized, and portions of the floor slab in the northern portion of the building were sealed with epoxy.

3.5 BAILER HYDRAULIC ROOM AND RESTROOM BUILDING

Other small structures also proposed for demolition down to top of slab grade include support buildings related to former smelter operations. These structures consist of the Bailer Hydraulic Room and Restroom Building. The Bailer Hydraulic Room is a small cinderblock building located on the southwest exterior wall of the Foundry Building, adjacent to the Brick Shop. The single story Restroom Building is constructed of cinderblocks and is located adjacent to the west end of the Tank House Building.

These buildings presently serve no purpose and are in a state of disrepair.

3.6 AAF DECONTAMINATION AREA AND SUMP

In August 2007, the Estate contracted with Industrial Trading Group, Inc. (ITG) to demolish the AAF. The demolition effort, which included the removal of several stainless steel pipe runs and ductwork, was ceased after ITG demobilized from the Site in September 2007. Prior to demobilizing, ITG constructed a decontamination pad area, located on the north side of the Tank House Building, to decontaminate any removed piping. The decontamination pad area was also located adjacent to a sump designed by Chemetco as a low point to capture storm water. These areas were classified by IEPA as a Hazardous Waste Management Unit and are currently required to undergo RCRA closure, as stated in a violation letter received by the Estate from IEPA, dated October 10, 2007 (IEPA, 2007).

A portion of the AAF area is subject to additional cleanup measures as described in the work plan titled *RCRA Closure Plan, AAF Decontamination Area and Sump* dated January 31, 2008 (RCRA Closure Plan) (Estate, 2008b). Additional cleanup measures to be performed in the AAF area are discussed further in Section 6.5.

4.0 REGULATORY CONSIDERATIONS

Upon IEPA's approval of this Demolition Plan, all demolition work performed at the Site as described in this Demolition Plan will be considered as being conducted in compliance with the IO since MBM is managed in accordance with this Demolition Plan will not be considered WAM.

The demolition work will also be performed in compliance with applicable federal, state, county, and local statutes, laws, regulations, rules, ordinances, or codes as related to execution of the activities described in this Demolition Plan and specified in Tables 1 and 2.

Removal, handling, transportation, and disposal, or recycling of hazardous materials, including materials coated with lead-based paint (LBP), ACM, and universal wastes will be performed in compliance with applicable regulations.

Collection, handling, and temporary relocation or storage of MBM that are collected and handled as part of the demolition work is discussed further in Sections 5.4 and 5.6.

4.1 PERMITS AND SUBMITTALS

The following is a list of permits and submittals that may be required from governing agencies to perform the demolition activities described in this Demolition Plan. This list is based on previous experience in performing similar work; however, there may be additional permits that might be required specific to this project.

Permit/Submittal	Agency
Erosion Control & Storm Water Pollution Prevention Plan	Madison County Planning Department and IEPA Industrial Storm Water Section
Asbestos Abatement Project Notification	IEPA
Demolition/Renovation/Asbestos Project Notification	IEPA
Demolition Permit	Madison County Planning Department
Closure/Completion Documentation Specifically Identified in the Demo Plan	IEPA

4.2 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

The ARARs for the abatement and demolition work are described in Table 1 of this Demolition Plan. ARARs are substantive requirements that are either directly applicable or relevant and appropriate to actions or conditions at the site. The ARARs proposed in Table 1 are standards of control, or other substantive environmental protection requirements, criteria, or limitations promulgated under Federal environmental or State environmental law that specifically address

the hazardous substances, pollutant, location, or other circumstance that may be encountered during site demolition activities. The ARARs listed in Table 1 are specific to the demolition work and until specific remedies for other portions of the Site are identified, ARARs under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or other RCRA areas cannot be selected and are not proposed in this Demolition Plan. The ARARs selected meet the requirement to ensure that they establish a protective basis for the ongoing work at the Site and for potential Site reuse.

Potential ARARs listed in Table 1 were identified from pertinent environmental and health statutes including the following:

- RCRA (42 U.S.C. § 6901 et seq);
- Occupational Health and Safety Administration (OSHA) Requirements (29 Code of Federal Regulations [CFR] 1910, 1926.1101);
- 35 Illinois Administrative Code (35 IAC Chapter 700 – 729, 733, 739, 742, and 807 - 809); and
- Department of Transportation (DOT) Rules for Hazardous Materials Transport (49 CFR 107, 171.1-500).

4.3 HEALTH AND SAFETY

All work activities described in this Demolition Plan will be performed in compliance with applicable federal and state OSHA regulations including incorporation of the OSHA Lead in Construction Standard, 1926.62. Site workers involved with the collection and handling of potentially hazardous materials will be 40-hour OSHA trained per the requirements of 40 CFR §1910.120.

Prior to initiation of field activities, a Site-specific HASP will be prepared by the demolition contractor that will address known Site hazards, the anticipated work scope, and related monitoring and personnel protective equipment (PPE) requirements to implement the work in a safe manner. A full-time dedicated Site Safety Supervisor will be present on site during performance of the work to oversee and supervise compliance with health, safety, and environmental regulations. The name of the contractor's Site Safety Supervisor and the HASP will be provided to IEPA prior to the start of demolition activities.

4.4 EMERGENCY NUMBERS

As part of the hazardous waste regulations 35 IAC 725 Subpart D, a contingency plan with emergency procedures titled "Chemetco Site Emergency Response and Evacuation Plan, December 17, 2008," was previously prepared by the Estate. This plan includes safety requirements, emergency telephone numbers for public works, ambulance, police and fire

departments. It also includes a map showing the location and route to the nearest emergency medical care facility.

This plan will be amended to also include the contact names of additional project personnel from IAD and the contractor, as appropriate for the pending demolition, and will be maintained on file at the Site.

4.5 GENERAL RECORDKEEPING

IAD and the Estate will maintain documentation at the Site for all materials shipped or disposed off site, along the approximate quantity of MBM that is collected, relocated, or consolidated and staged for future processing. Documentation maintained on file will include:

- profiles;
- manifests;
- applicable forms;
- certificates of disposal;
- records of the volume and/or tonnage of recycled, sold and disposed materials;
- point of origination and point of relocation for MBM moved or consolidated during the performance of the demolition work;
- approximate quantity of MBM handled, along with date of movement; and
- before and after photo documentation regarding the condition of slabs, buildings, or areas where MBM is temporary placed or staged.

In addition, the names of demolition contractor personnel will be kept on site per the requirements of the Seal Order. Additional records regarding personnel on site will be provided to the Estate and IEPA prior to the start of demolition. These records will be maintained on site and available for review.

5.0 PRE-DEMOLITION SITE PREPARATION ACTIVITIES

This section describes the general procedures for the pre-demolition Site preparation activities that will be performed prior to the building demolition work at the Site.

5.1 TEMPORARY FACILITIES AND SITE CONTROLS

Facilities including field offices, lunch and break areas, toilet facilities, potable water, hand wash facilities, and storage facilities for the project personnel presently exist in the administrative buildings located along the west side of the Site. All utilities serving the

administrative buildings including telephone and facsimile service, and construction and/or safety lighting presently exist and will be maintained during demolition activities.

A demolition work zone perimeter will be established by the contractor prior to commencement of demolition activities. Site controls, such as temporary chain-link fence panels and gates and visual barrier screening will be erected by the contractor along the perimeter of the demolition work zone to demarcate work area boundaries, to provide for a decontamination area for personnel and to prevent ingress/egress by unauthorized personnel. Smaller work areas within the demolition zone will be demarcated by orange mesh fencing, traffic delineators or caution tape. Control of all persons and vehicles entering and leaving the demolition work area, and material staging and storage area(s) will be provided by the contractor during performance of the demolition work. Access to the Site will be denied to any personnel or individuals who are not properly identified or authorized for entrance.

The proposed demolition work zone boundary is shown on Figure 4. The actual location of the boundary will be determined in the field based on existing Site features and the amount of space that is required for staging and handling of material. The location of the boundary and size of the area enclosed within will vary over the course of the project depending on specific work activities and space needs.

5.2 STORM WATER MANAGEMENT

The contractor will establish storm water BMPs at specific locations of the perimeter of the demolition work zone to divert storm water run-on from entering the work areas, to prevent uncontrolled run-off from leaving active working piles or work zones, and to channel/divert storm water to the perimeter collection system, or existing collection points or sumps associated with the closed loop storm water management system.

Storm water that will collect in the two existing sumps on the south fence line will be diverted through an existing 6-inch above ground polyvinyl chloride pipe that connects to the Retention Basin. The 6-inch line will be inspected and repaired as necessary prior to being utilized for diversion purposes. If the line is inoperable, collected storm water will be diverted to an alternate collection point and introduced into the concrete manway associated with the perimeter storm water collection system located outside the east fence line, directly east of the cooling canal. Storm water will then discharge in a controlled manner through Outfall 005 under the existing conditions stated in the NPDES permit. The demolition contractor will also place cobble-sized limestone aggregate riprap along the outer slopes of the south side of the Retention Basin around the outfall area for purposes of erosion control and preventative maintenance.

Water that may accumulate within the AAF area during demolition is presently removed via the Main Pump House and either transferred to the former cooling canals or directed to spray irrigation for purposes of evaporation and volume control. Once demolition starts, spray irrigation for volume control will likely cease and any water removed from the AAF area via the AAF collection sump will be transferred to the Main Pump House and conveyed to the existing cooling canals on the north side of the Site. If water levels are high in the cooling canals when water may need diverted there, it may be necessary to pump water from the cooling canal directly into the perimeter system at the northeast corner of the Site. If additional temporary storage capacity is required the water from the AAF area may be diverted to the former slag granulation barge located northeast of the AAF area.

Storm water controls may consist of sand bags, silt fences, gravel bags, berms and straw waddles. Storm drains or catch basins that exist in close proximity to buildings proposed for demolition will be disabled by plugging the discharge pipe with concrete or other approved engineered materials, except those that contain a lid or man hole cover or are located in areas not proposed for demolition to slab grade. Storm water ponding or accumulations visible after significant storm events will be directed to drainage collection areas based upon either Site topography or diversion berms, then collected and transferred to the pre-existing Site storm water management system for diversion to the Retention Basin and eventual discharge through the NPDES-permitted storm water Outfall 005.

The contractor will inspect and maintain all storm water controls on a weekly basis, and after each major storm event. A written record of this will be maintained on site by the contractor. Any damages to these controls will be repaired when they are observed. Stockpiles of demolition-related debris generated during the course of the demolition work will be covered during periods of inactivity and prior to forecasted storm events. In addition, stockpiles will be strategically located or established at locations within the demolition work zone that will not receive storm water run-on or are not susceptible to ponding. Solid waste roll-off bins or containers will also be covered during periods of inactivity and prior to forecasted storm events to prevent potential commingling of storm water with demolition materials.

Sand bags, gravel bags, straw waddles, temporary berms, or other similar BMPs will be placed around the buildings ingress/egress points to prevent storm water run-on from entering any building demolition areas or water run-off from exiting any demolition areas in an uncontrolled manner. Storm water BMPs to be employed during demolition activities are shown on Figure 5.

5.3 DUST CONTROL

The contractor will employ preventative measures to minimize fugitive dust emissions during pre-demolition preparations and also during subsequent demolition activities. Dust control measures will consist of water spray, foggers or misters, and will be implemented during performance of activities that may generate fugitive dust, or if airborne dust is visually observed. The contractor will periodically monitor the demolition work zone to ensure that no large volumes of water from the dust control activities are pooling or ponding, which could create a work hazard.

5.4 DEBRIS AND WASTE COLLECTION

Various types of debris are present around the Site including the buildings proposed for demolition. This debris poses slip, trip, and fall safety hazards and is unsightly and messy. Debris will be collected within the demolition work zone and removed as a general housekeeping and safety-related preparation step prior to performance of subsequent building cleaning, abatement and demolition work.

In addition, surface accumulations and discrete stockpiles of slag or other MBM are present on slab areas around the Site and within and adjacent to former processing buildings in the proposed demolition work zone. These materials are a physical hindrance to working in certain areas and also pose a potential source of contamination to storm water that may accumulate in these areas, or could be subject to transport by wind or surface water.

Black slag that is present outdoors within the proposed demolition work zone and adjacent staging areas will be collected with a front end loader or backhoe, relocated, and consolidated outdoors on a portion of open and unoccupied concrete surface slab and placed in a pile separate from any other slag material. The relocated slag material would be placed directly on the concrete slab, without perimeter berms or cover, in an area that does not pond or accumulate storm water. Slag relocation work will be documented as described in Section 4.5. The relocated slag would stay in that location until it can be processed on site at a later date under procedures to be described in a subsequent Slag Processing Work Plan. Full-scale slag processing will likely not occur within 90 days of initial collection and handling of these materials associated with debris collection and building demolition.

5.4.1 Debris Staging Areas

Debris Staging Areas will be established on the concrete slab areas and will contain temporary accumulation zones for the various types of debris being collected. Staging areas will be located within portions of the Site, such as the west side of the Foundry Building or west of the Dome Building, that allow for reasonable vehicle access for purposes of debris handling,

loading, and transportation. The staging area will contain roll-off bins, dumpsters, trailers, or other containers depending on the quantity of material associated with each debris type.

5.4.2 Debris Collection

Debris will be manually collected and transported via fork lift or other light duty motorized equipment to the Debris Staging Area, or directly loaded into a roll-off bin at the point of collection. Large debris may be loaded into and/or moved with equipment such as a rubber-tired backhoe or loader. Large accumulations of a single debris type will be collected by placing a roll-off bin or other similar transportation vessel in the nearby vicinity and direct-loading debris into the bin to minimize handling. Debris materials collected, which include wood, building debris, plastic, and possibly concrete, will be handled and stockpiled or containerized separately during collection activities.

Concrete that does not appear visually impacted will be placed in a separate pile. Representative samples of each pile will be obtained and analyzed separately for total and toxicity characteristic leaching procedure (TCLP) metals for waste profiling purposes prior to shipment off site for recycling or disposal. Analytical results will be relayed to IEPA personnel via telephone for approval to ship concrete off-site. Concrete debris with analytical results that are below the Tiered Approach Corrective Action Objectives (TACO) Tier 1 Industrial/Commercial Standards for soils may be left in a pile on site for future use as clean fill.

Scrap metal or other large impervious recyclable debris that may contain visual surficial accumulations of slag or dust will undergo gross decontamination procedures at the point of collection then be transferred to the Debris Staging Area for off-site recycling. Decontamination procedures are further described in Section 5.5. A summary of general Site debris to be addressed under this Demolition Plan along with proposed handling and disposition guidelines for each debris stream is provided in Table 2.

In summary, the materials mentioned previously will be collected and stockpiled separately during debris collection activities. Each debris type will be sampled for TCLP metals as applicable prior to disposal. The contractor will make every effort to separate the various debris types and waste streams present at the Site into separate piles. Some debris such as cardboard and paper cannot easily be separated from other material present. The contractor will collect and submit a representative sample from each debris pile to a third party analytical lab for TCLP analysis. The results will determine the waste profile and appropriate off-site disposal options.

5.4.3 Other Hazardous Materials Collection

Residual quantities of containerized liquids are located within the Foundry and Tank House Buildings. Collection of unknown liquids, solids, or other miscellaneous wastes present within proposed demolition areas will be performed by the contractor as part of demolition Site preparation. Waste collection, inventory and categorization work will be supervised by a Hazardous Characterization Specialist for purposes of "lab-packing," waste profiling and eventual disposal.

An existing 90-day hazardous waste storage and accumulation area used during former Site operations is located in a small building adjacent to the Receiving Building. During demolition activities, this area may be used for hazardous materials collection during "lab-packing" activities. The contractor will delineate a storage area for collected hazardous materials that will be identified by demarcation tape and orange traffic delineators. All waste materials collected will be catalogued in a file that will contain completed manifests, material type and quantity disposed, recycling records, and certificates of disposal as applicable. Hazardous wastes disposed of under this Demolition Plan will assume the Estate is the generator and will use their existing EPA ID number. The catalog list will be provided as part of closeout documentation to IEPA at the completion of the demolition work. Because there is a pending CERCLA action for the Site, this accumulation and storage area does not require a permit and the RCRA storage provisions do not apply.

5.4.4 Former Smelter Feedstock

Raw product materials that were received by the Site prior to shutdown are present within the Foundry Building. These materials were intended for smelting and include, among other things, items such as chipped circuit boards and Tin Dross. The former furnace feed materials that cannot be processed on-site during pending metals processing work will be transferred to DOT-approved shipping containers inside the Foundry Building during the performance of debris collection activities. Heavy equipment such as a Bobcat, fork lift, and/or a backhoe will be used during the transfer of these materials to new containers. The material transfer work area will be dry and free of other MBM. After transfer is complete, any residual feedstock material associated with the transfer will be swept or vacuumed up and placed within the shipping container. These repackaged materials will be sealed and labeled and will remain temporarily stored inside the Foundry Building until they are shipped off site to yet-to-be-determined buyers of smelter feedstock materials such as these. Usual and appropriate notifications will be made by the Estate under existing procedures prior to off-site shipment of any facility assets.

5.5 DECONTAMINATION PROCEDURES

Decontamination areas will be established inside the demolition work zone for materials, equipment and personnel. Decontamination procedures are described further in the following subsections.

5.5.1 Personnel Decontamination

Small decontamination areas will be constructed at the ingress/egress points of the demolition work zone to insure that MBM is not tracked beyond the demolition work zone boundaries. These decontamination areas will be constructed to contain wash water associated with shoe wet brushing and cleaning, along with receptacles for storage of spent PPE.

5.5.2 Equipment and Demolition Debris Decontamination

Impervious (non-porous) equipment and demolition debris intended for off-site recycling will be visually inspected for the presence of residual accumulations of MBM. If scrubber sludge or slag is visually present, the equipment or debris will be decontaminated prior to off-site recycling. Decontamination procedures include two specific guidelines or levels of decontamination as follows:

- Gross Decontamination –the initial phase of the decontamination process during which the amount of surface contaminants are significantly reduced. Thick or widespread accumulations of scrubber sludge, slag, or dust present on debris or equipment will be removed by mechanical scraping, brushing, or broom sweeping to the extent practicable at the point of collection around the Site. Gross decontamination will be employed during general collection of debris to prevent tracking of residual materials during debris loading or relocation to on-site Debris Staging Areas, or Wet Decontamination Areas, if additional cleaning is needed. In many cases gross decontamination will be sufficient for purposes of off-site recycling, and for vehicles and equipment exiting active work zones.
- Wet Decontamination - debris determined to require additional cleaning with water prior to recycling will be decontaminated with steam cleaners, high-pressure washers, or other methods until there is no visual evidence of loose residual dust or slag present on the debris surface.

All Site heavy construction equipment used in demolition will undergo wet decontamination prior to Site demobilization.

5.5.3 Wet Decontamination Facility

A large contained decontamination pad will be established inside the southern half of the former Dome Building area. The three-sided concrete walled storage area contains a concrete floor and will be used as needed for decontamination of large sections of demolition debris that may require additional cleaning with pressure washers. The steel roof of the Dome Building will initially be removed for safety purposes. Once the steel roof is removed, MBM present

within the DIS Building will be pushed into a stockpile towards the interior walls to create additional available space for storage of all materials to be relocated from the Dome Building. It is anticipated that this material handling step will be performed utilizing a rubber tired loader. After the space is made available, the floor area will be inspected and conditions will be documented. If necessary, any cracks in the DIS Building floor that penetrate the full slab thickness will be sealed prior to relocation to the DIS Building of Dome Building MBM. All existing piles of scrubber sludge and slag fines present in the Dome Building will then be relocated utilizing similar equipment into the adjacent DIS building for storage. This MBM will be stored under cover (staged) within the DIS Building until subsequent on-site processing can be performed at a later date.

Once cleared, the floor of the Dome Building will also be visually inspected for large cracks or openings. If present, these areas will be sealed and the floor areas will be cleaned for subsequent use as a decontamination pad. Depending on available space, the walled area within the Dome Building footprint may also be employed as temporary consolidation and holding areas during debris and scrap metal collection and removal activities.

5.5.4 Decontamination of Scrap Metal

Based on a visual inspection scrap metal that will require additional decontamination prior to temporary staging and shipment will be transferred to the Decontamination Area after initial gross decontamination. Wet decontamination of scrap metal will occur if the debris:

- (1) appears visually impacted with loose accumulations of MBM that cannot be removed by gross decontamination methods, or
- (2) if the scrap metal requires additional cleaning to meet the acceptance requirements of the receiving facility.

Following this criteria, scrap metal will undergo decontamination in a containment pad utilizing mechanical action and/or pressure washer. If no visible scrubber sludge, slag or other debris is observable, then the scrap or demolition material will be deemed clean and ready for off-site recycling. Once the scrap metal is decontaminated, clean scrap metal will be transferred to the Staging Area for any additional sizing or preparation prior to loading and shipment. All decontamination rinse liquids generated during wet decontamination will be collected and stored in 21,000 gallon frac tanks and labeled as "Decon Water." Containers of decontamination water will be stored inside the demolition work zone for subsequent use on site during MBM processing activities.

5.6 COLLECTION AND CONSOLIDATION OF SCRUBBER SLUDGE DUST

Large accumulations of scrubber sludge dust generated from former smelting operations are present throughout the interior surfaces of the Foundry and Tank House Buildings and the interior ducting of the Baghouse and AAF. The dust is very fine grained and poses an

inhalation hazard to construction personnel. Efforts will be made to collect as much of this material as possible prior to performance of abatement and/or demolition so as to minimize potential hazards to Site workers and also to minimize generation of fugitive dust emissions during demolition. Personnel handling scrubber sludge dust capable of becoming airborne will wear Level C PPE during collection and consolidation activities.

The dust collection work will primarily consist of sweeping and shoveling to collect the majority of the material in areas where large quantities are present, followed by dry vacuuming to collect the remaining material. Generally, large accumulations on the open ground, floor, or slab surfaces will be collected with heavy equipment such as a loader, Bobcat, or backhoe and placed inside a closed top bin for transfer to the Fines Building where the closed top bin will be dumped (emptied on the floor slab) and the material will be pushed into a single stockpile and stored in bulk. Residual quantities remaining after collection with heavy equipment will be gathered by sweeping, shoveling, and/or vacuuming. This MBM will also be transferred to the Fines Building. MBM present on the horizontal surfaces of interior building structural members will be collected by vacuuming then transferred to a bulk container for relocation to the Fines Building. Additional information regarding the use of the Fines Building for temporary staging (storage) of MBM prior to eventual on-site processing is described at the end of this section.

There may be certain instances, such as close quarter areas, that limit or prevent access of construction equipment, and material there will be collected with a mini vacuum and placed into a Super Sack instead of a covered bin for handling purposes. It is anticipated that this "close quarter" handling would be done on a very limited basis. In some cases, such as areas of the Baghouse interior or Foundry Building high ceiling beams, high-pressure/low-flow water washing may be necessary. Building wash water will be collected and containerized with other decontamination liquids. The contractor will utilize water spray, misters, and/or foggers as needed to minimize the occurrence of dust emissions during dust collection activities.

Once the dust is collected and consolidated in either a closed top roll-off bin or Super Sack container, the material will be transported to the Fines Building for temporary covered storage until such time as it is processed on site. No material other than fine-grained MBM will be temporarily stored in the Fines Building.

The Fines Building consists of 6,000 square feet of covered area with a concrete floor and concrete perimeter walls extending approximately 8 ½ feet above slab grade. The roof is a steel truss covered with a steel skin, with an interior height of approximately 20 feet at its highest point. Although the Fines Building is open at one end, the interior remains relatively dry. Dust material transported by closed top roll-off bin will be dumped and stockpiled in bulk within the Fines Building. Material transported by Super Sack container will also be stored within the Fines Building. Recovered dust will then be processed on site at a later date to

extract the marketable metals contained within using methods and means which will be described under a separate work plan.

IAD will enclose the open end of the Fines Building with a wooden frame covered with corrugated fiberglass siding or other like material, to provide additional containment and protection from the elements. In addition, the new wall would contain a doorway to allow access of construction equipment, and a small rounded asphalt curb would be placed on the slab across the doorway to prevent potential storm water run on from entering the building. Prior to the relocation of any MBM to the Fines Building, the building and floor slab will be inspected and documented. Any existing cracks that fully penetrate the interior floor slab down to the underlying soil will be sealed prior to placement of any MBM there. Building walls will be patched as necessary to repair any tears or damage to the sheet metal skin. All repairs will be documented. Once material is consolidated there, the building will be inspected weekly for physical damage and repaired as necessary.

5.7 AAF DECONTAMINATION AREA AND SUMP

The AAF decontamination pad area and sump are critical work areas for demolition ingress/egress to the AAF system and adjacent Foundry and Tank House Buildings. Certain remedial action activities will be performed by the contractor in this area as part of the demolition scope. The remedial actions to be performed are defined in the RCRA Closure Plan, AAF Decontamination Area and Sump (Estate, 2008b) and summarized in the following paragraphs.

The remedial measures will address IEPA concerns with residual surficial contamination present on the slab and potential transport or migration of this material beyond the currently defined area. The remedial actions will include the following.

1. Relocate all sections of duct that have residual scrubber sludge contamination back into the AAF Demolition Preparation Area (according to Estate personnel this task has been completed).
2. Pump all storm water in the area into the north Polishing Pit.
3. Using a vacuum truck with suction hose and nozzles, vacuum the surface of the entire area, including inside the sump to remove all residual scrubber sludge material to the extent practicable. These materials will be relocated to the Fines Building for storage prior to eventual processing of this MBM.
4. Pressure wash the AAF decontamination area and sump three times, collect all wash waters, and transfer to temporary water storage tank in the Decontamination Area. The slab wash water will be stored for reuse with other decontamination liquids for use as slurry make-up water in subsequent processing of MBM at the

Site. Determination of whether the accumulated material and wash water is a RCRA hazardous waste is required under 40 CFR §261.11, as listed in Table 1.

5. Seal the outlet pipe in the sump with concrete.
6. Coordinate IEPA inspection and acceptance of all closure-related remedial actions completed.
7. Submit required closure information prepared by an Illinois Professional Engineer at the conclusion of performance of demolition activities.

Based on its discussions with IEPA, the Estate understands that approval of this Demolition Plan will be considered to be approval of a modification of the RCRA Closure Plan, AAF Decontamination Area and Sump (Estate, 2008b), consistent with the discussion in this paragraph.

5.8 TERMINATION OF UTILITIES IN FOUNDRY BUILDING

Electrical power is presently delivered to the Site through high voltage overhead power lines that enter the property from the southeast and terminate at an electrical substation located on the northeast corner of the Foundry Building. The substation is owned by the local utility provider Ameren, and houses transformers that convert the electricity from high voltage (34,500 volts) to moderate voltage (4,160 volts), which is then reduced to low voltage (480 or 220 volts) in the Estate's transformers, to meet the electrical demands of the Site. Electrical distribution lines from the substation feed into the Foundry Building where it is then distributed throughout the Site.

Electricity is also required to power storm water collection, distribution and control pumps, and meet other electrical requirements of the adjacent office and administration buildings. Additionally, electricity will be required to power equipment associated with the pending on-site processing of MBM.

Electrical lines to the Foundry Building will be rerouted away from the Foundry Building and reconnected to the structures on site that require electricity prior to the performance of building demolition.

5.9 HAZARDOUS BUILDING MATERIALS SURVEY

In general conformance with the National Emission Standards for Hazardous Air Pollutants and the Illinois Department of Public Health (IDPH) requirements, a hazardous building materials survey was conducted September 21 through 25, 2009, by Geotechnology Inc. (Geotechnology), an Illinois-licensed asbestos inspector (Geotechnology, 2009).

The scope of the survey included material sampling of suspect ACM, LBP, household hazardous waste (HHW), or universal waste materials in approximately 31 above ground structures and several debris piles. The approximate quantity and type of ACM identified within the Foundry and Tank House Buildings are summarized below.

Foundry Building

Location	ACM	Quantity
2nd floor offices and hall	Non-friable 12" x 12" cream color floor tile	1,800 SF
2nd floor x-ray analyzer lab	Non-friable 12" x 12" cream color floor tile and mastic	200 SF
bottom of staircase to transformer room	Friable thermal system insulation (magblock)	25 SF
2nd floor sample prep. office	Friable gray lab sink counter	1 unit
2nd floor east wall in two east office, barrier wall between furnaces and x-ray lab, and barrier wall between hall and A/C closet	Non-friable transite wall panels	700 SF

Tank House Building

Location	ACM	Quantity
Upper level offices	Friable panel adhesive	250 SF
Upper level offices	Friable window glaze	100 LF
Upper level offices	Non-friable two-layers of 12" x 12" floor tile and two-layers of mastic	200 SF
Exterior Roof	Non-friable flashing on roof seam over loading dock and around green louvers	200 LF

LBP was identified on surfaces within the Foundry Building. HHW, or universal wastes, were identified within the Foundry and Tank House Buildings. Examples of universal wastes identified within the Foundry and Tank House Buildings and AAF included fluorescent lights, polychlorinated biphenyl (PCB) light ballasts, mercury thermostats, paints, various bulbs, transformers, air conditioning units, and other materials. Mercury switches and fluorescent bulbs identified in the survey (Geotechnology, 2009) will be managed as universal wastes. These materials will be handled, managed, and properly disposed of following 35 IEPA Regulations 35 III IAC 733, Subparts B and D. Geotechnology, Inc. assumed that each light ballast identified was intact, non-leaking, and PCB-containing. Non-leaking PCB light ballasts will be managed as a municipal solid waste following 35 IAC, Subtitle G. No suspect materials were identified in the Bailer Hydraulic Room or the Restroom Building. Oil within the furnace hydraulic systems in the Foundry Building was sampled and analyzed for the presence of PCBs by EPA Method 8082. No PCBs were detected in the oil.

5.10 HAZARDOUS MATERIALS ABATEMENT

Prior to demolition of the Foundry, Tank House, and AAF Buildings, the ACM, LBP, and HHW present there will be abated by an IEPA-licensed contractor for asbestos and lead abatement. Other restricted wastes such as switches containing mercury or oil-filled electrical or mechanical components will also be removed and properly disposed off site. All abatement activities will be performed per EPA, OSHA, IEPA, and IDPH regulations.

Decontamination chamber and clean areas and work areas for asbestos abatement work will be established and maintained in accordance with OSHA 29 CFR 1926.1101 asbestos requirements. A third party Illinois-licensed asbestos inspector will be retained to perform clearance sampling and documentation of abatement activities.

Upon completion of the abatement work, a report will be prepared by the abatement contractor describing details of the work performed along with results of testing and documentation of proper disposal of ACM, LBP, and HHW. This completion report will be included with other project closeout documentation submitted to IEPA.

6.0 DEMOLITION ACTIVITIES

Demolition activities will be performed by a licensed environmental demolition contractor under contract with IAD. Demolition activities will include removal of above ground piping, ductwork, and above ground storage tanks (ASTs) located within the demolition zone, demolition to slab grade of the Foundry Building, AAF, Baghouse and Control Room, Restroom Building, and Hydraulic Bailer Room, removal and salvage of furnace ovens located in the Foundry Building, management of decontamination-derived materials, debris handling, and debris disposition and recycling. Interior-only demolition will be performed in the Tank House Building.

The interior and exterior of the AAF, and the interior of the Tank House and Foundry Buildings will be decontaminated prior to performance of any demolition activities, including furnace removal within the Foundry Building. The general approach or sequence of demolition work is described as follows: (1) collect and remove MBM and other debris from the building interior, (2) decontaminate and clean the building interior, (3) perform abatement activities as necessary, and (4) demolish the structure. Arrangements will be made for disposition of demolition debris in a timely manner, although certain items may possibly be on-site ready for shipment when the furnace removal work described in Section 6.4 is performed.

With regard to structure demolition, it is tentatively planned to demolish the AAF first to allow better access for subsequent demolition to both the Foundry and Tank House Buildings, although actual phasing of demolition may change based on conditions encountered in the field, and availability of equipment. Buildings and structures proposed for demolition will be

removed down to the top of the existing slab, leaving the slab and other concrete structures intact. Concrete slab, footing, foundation, pony wall, or other potential underground structure removal work is not proposed or anticipated to be performed during the pending demolition work. Existing concrete debris piles present at several locations around the Site will be left undisturbed, and will not be recycled or disposed off-site at this time.

The following sections further describe the procedures related to proposed demolition activities.

6.1 REMOVAL OF PIPING

Process piping and ductwork present within the structures to be demolished will be drained and flushed, or vacuumed as necessary prior to demolition. The following procedures will be used on liquid-filled piping.

1. Low points will be located and marked prior to removal of any residual liquids. Each oil line will be opened at the high point (if necessary a cold cut with a non-sparking cutting tool will be made) and drained to the marked low point and the liquids will be collected in appropriately-labeled containers.
2. Any remaining liquids in the lines will be flushed out with clean water. Rinse water will be drained to low points and contained in appropriately-labeled containers.
3. All contained rinse water and drained liquids will be contained in DOT-approved drums and transported to a designated temporary storage area on site for profiling and eventual disposal.
4. Plastic and other non-metallic piping will be disposed of at an off-site facility if additional decontamination is necessary. Metallic steel piping may also be recycled at an off-site salvage facility depending on the size and condition of the material.

6.2 REMOVAL OF ABOVE GROUND STORAGE TANKS

Six former ASTs are located adjacent to buildings or structures within the proposed demolition zone and will be removed during demolition activities. Three former ASTs are located adjacent to the polishing pits and were previously used to temporarily store Scrubber Sludge slurry. One AST is located within the AAF area and previously contained a caustic to neutralize acidic materials associated with AAF operations, one AST is located west of the Tank House Building that previously contained an acid solution, and one AST is located in the southeast interior of the Tank House Building. These ASTs are no longer in service and will be demolished during the building demolition process.

The demolition contractor will coordinate with the local permitting authority as needed prior to initiating AST removal activities. Any residual contents in each AST will be removed and containerized for profiling prior to disposal. Any necessary AST entry work will be performed

in accordance with applicable American Petroleum Institute (API) guidance documents (e.g. API 2015). Following removal of tank contents, each AST will be purged or vented as appropriate and the interior and exterior surfaces of the tank will be thoroughly decontaminated following procedures described in Section 5.5 for decontamination of scrap metal.

6.3 FOUNDRY BUILDING, BAGHOUSE, AND CONTROL ROOM DEMOLITION

Demolition activities associated with the Foundry Building, Baghouse, and Control Room will consist of the above grade structure demolition down to the floor slab. These activities include, but are not limited to, collection and removal of debris in the work area; dust and/or slag consolidation; removal of bags and cages from the Baghouse; ACM, LBP, and HHW abatement; furnace salvage and removal, and termination of electricity and other known utilities.

Once the buildings have been generally cleared of debris, decontaminated, and abated, it is anticipated that the contractor will utilize excavators with hydraulic shear attachments and/or cutting torches to dismantle the building structures. Gross decontamination will be performed on the large rooftop ductwork prior to removing the structure from the roof of the Foundry. Residual dust present in the large ductwork will be vacuumed and conveyed to the Baghouse for eventual removal as described in sequential steps as follows.

1. Access holes will be cut into the 12-foot diameter air collection manifold duct (main duct) on top of the Foundry Building to allow entry and cleanout of the main duct using specialized equipment and personnel and in accordance with confined space procedures.
2. The contractor will push any residual standing dust remaining in the main duct to the southern end of the manifold where it will drop down into the main reservoir.
3. An access opening will be cut in the main reservoir where the contractor will utilize a super sucker (dry vacuum) to remove the material and vacuum it directly into closed top roll-off bins for transfer to the Fines Building for storage. The cleanout of the main reservoir and trailer will be conducted within the confines of each unit which will minimize fugitive dust during the clean out.
4. The screw conveyors at the bottom of the trough will be removed to allow access to the bags for vacuuming and collection of residual dust once the reservoir is empty.
5. The snap rings will be cut, and the bags will be folded and collapsed into the hopper to control dust once residual dust in the bags have been emptied out. The bags will be collected at the bottom of the hoppers and placed into DOT hazardous-certified closed top bins for characterization and disposal.

The roof ductwork will then be cut into sections and lowered to the ground surface with a crane, followed by the roof and superstructure. Once on the ground excavators will shear and size the steel for handling purposes. Steel and other scrap will be visually inspected and if further wet decontamination is needed the scrap will be transferred to the wet decontamination area located in the Dome Building. There it will be decontaminated, cut, and sized, then loaded into hauling trucks for transportation to a steel scrap recycling or smelting facility. After the steel and scrap is removed from the building footprints, the building slabs will be cleaned of any remaining dust and debris. All MBM collected from slab cleaning efforts will be stored on site for future processing. Limited concrete rubble that may be generated from each building will be collected and stockpiled on site for waste determination sampling.

6.4 FURNACE REMOVAL AND SALVAGE

The Foundry Building houses three large furnaces located on the east side of the building. Each furnace weighs in excess of 140 tons and is supported by steel I-beam framing anchored to the floor slab, approximately 20 feet above grade. Once the Foundry Building is demolished to allow access for a crane, the contractor will clean, remove, and cut the large metal tilt ring gear box and bearing assembly from the shell of each furnace for salvage. These furnace components will then be shipped to Europe for reuse at another smelter facility.

In order to transport these furnace components off site, the top and bottom of each furnace shell will need to be cut off in place. In addition, salvaged parts will require decontamination prior to transport off site. The remainder of the furnace shell and steel I-beam framing will be scrapped as part of demolition activities associated with the Foundry Building. The following steps and procedures will be performed by the contractor to properly salvage and remove the furnaces.

1. Remove dust and metal/slag splatters from all exterior surfaces of the furnace to be contacted during the mechanical work. Furnace dust removal will be performed during Foundry Building decontamination following procedures described in Section 5.6.
2. Drain all furnace hydraulic systems. The contractor will construct temporary containment pads below the furnace support structure prior to disconnecting or draining hydraulic fluid. Once the hydraulic systems are disconnected from the system, the contractor will use brushes, rags, and/or pressure washers to clean work surfaces of grease and scrubber sludge in order to gain access to fittings and connections. Hydraulic fluids collected will be placed in 55-gallon drums, labeled, profiled, and manifested accordingly for off-site disposal.
3. Remove refractory brick and interior furnace dust from furnaces following Foundry Building demolition. The contractor will disassemble refractory brick using mechanical means such as pneumatic hammers. Refractory brick will be collected in transport containers placed under the furnaces. The contractor will employ water

spray or misters as needed to suppress fugitive dust emissions. Refractory brick surfaces that came in contact with molten metals during past facility operations contain many of the target metals proposed for processing separation. This refractory brick can be crushed and processed on site, in a manner similar to other MBM present on site. Any existing spent refractory brick present within the demolition work zone will be collected and stored in an appropriately sized closed top container on site. Spent refractory brick removed from furnaces will also be stored in closed top containers onsite for subsequent processing with other MBM. The contractor will attempt to remove refractory brick in layers and keep each layer separate from subsequent layers. The outer layers that previously came in contact with molten metals will be stockpiled separately on site for future on-site processing similarly to other MBM. Underlying layers that may not have come in contact with molten metals will be kept separate and tested for waste determination purposes prior to disposition.

4. Cut and remove salvageable components of the furnaces. The contractor will mobilize a large crane to remove the top and bottom of the furnace shells. These shells will be cut off using gas torches, portable saws, or other approved mechanical means to accomplish the work. The shell will be decontaminated and shipped off site as scrap metal. Once the shell is removed, the contractor will remove structures and bolts holding furnace components in place and lift the furnace components onto a trailer or similar transport vehicle. The furnace components and crane will be decontaminated prior to transport off site following procedures described in Section 5.5.

6.5 AAF DEMOLITION

AAF demolition will be performed by the contractor utilizing similar equipment as described for demolition of the Foundry Building and Baghouse structures. Most of the stainless and galvanized steel piping and ductwork present in the AAF have salvage value. Deposits of scrubber sludge are present within the duct system. These deposits must be collected and removed from the piping prior to shipment off site. Gross decontamination comprised of mechanical scraping and dry vacuuming will be performed on the in-place ductwork to the extent practicable prior to disassembly. Once cleaned, the ductwork will be disconnected or cut into sections, and excavators or a small crane will be used to lower each section to the ground surface.

Once on the ground, the piping and ductwork sections will be visually inspected for the presence of residual scrubber sludge. If additional wet decontamination is required, ducting will be relocated to the Wet Decontamination Area at the former Dome Building. However, the contractor may elect to fabricate a smaller, lined, and contained decontamination area in the AAF based on Site logistics. Once the steel is cleaned it will be relocated to the Staging Area west of the Dome Building for off-site recycling.

6.6 BAILER HYDRAULIC ROOM AND RESTROOM BUILDING DEMOLITION

These smaller structures are proposed for demolition as they will not be used in any subsequent on-site slag processing work, and/or they are located in the immediate areas of other larger buildings proposed for demolition. The hazardous materials building survey did not identify any suspect ACM, LBP, or HHW within these structures.

It is anticipated that the contractor will utilize excavators with hydraulic thumb attachments to dismantle these building structures. Water sprays or misters will be employed during demolition to suppress any potential fugitive dust emissions. Scrap steel will be separated from other building debris for recycling. Non-metal building debris (wood and cinder block) will be loaded into bins and shipped off site to a construction and demolition debris landfill as solid waste. The side sewer connection associated with the Restroom Building will be capped during demolition.

6.7 TANK HOUSE BUILDING INTERIOR DEMOLITION

After general cleaning and ACM and LBP abatement activities are completed, the remaining process structures within the Tank House Building will be demolished. These structures include over 120 lead-lined, open top concrete pits previously used for electroplating work, a large horizontal tank, several electric pumps, and associated process piping. The lead lining from the pits will be removed, undergo gross decontamination, then salvaged off site. Process piping will be cut and sized for handling purposes and disposed as appropriate. Interior office and lunch room areas will be demolished with non-metal debris being loaded into bins and shipped off site to a construction and demolition debris landfill as a solid waste.

Contaminated concrete, as based on visual observation (stained or discolored), will be placed in a temporary stockpile for waste profiling purposes. Concrete that does not appear to be visually impacted will be placed in a separate pile. Representative samples of each pile will be obtained and analyzed separately for total and TCLP metals for waste profiling purposes prior to shipment off site for recycling or disposal. Analytical results will be relayed to IEPA personnel via telephone for approval to ship concrete off site. Concrete debris with analytical results that are below the TACO Tier 1 Industrial/Commercial Standards for soils may be left in a pile on site for future use as clean fill.

The IEPA-defined SWMU area referred to as the Black Acid Tank is located in the vicinity of the former electrolytic cells. The Black Acid Tank will be scrapped and the concrete supports removed to grade. The surface of the concrete covering this area will be pressured washed and all water collected for disposal.

After interior features are removed, the building slab areas will be dry-vacuumed then visually inspected for cracks or openings. Any cracks or openings within the floor will be sealed and the floor, wall, and ceiling areas will be cleaned to prepare the building for reuse in the on-site processing of MBM.

6.8 MANAGEMENT OF DECONTAMINATION-DERIVED MATERIAL

Decontamination-derived materials (DDM) generated as part of debris removal activities will generally consist of personnel and equipment decontamination wash and rinse water, plastic disposable equipment, and PPE.

All decontamination wash and rinse water associated with personnel decontamination will be placed within a small holding tank, and all solid DDM such as PPE will be placed into 55-gallon steel drums, closed-top bins, or other DOT-approved containers. The containers will be labeled with the following information:

- site name;
- site contact;
- type of waste;
- specific location or area where waste was generated; and
- date the drum was filled.

Drums of DDM will be temporarily stored on a concrete surface adjacent to the decontamination zone. The decontamination wash and rinse water from personnel decontamination and solid DDM will be sampled and analyzed for waste determination purposes. Based on the results of the waste determination, decontamination water and solid DDM will be properly labeled, managed, and disposed of off site as either a hazardous or non-hazardous waste. Once full, drums will be stored in a temporary waste accumulation area pending profiling and appropriate off-site disposal.

Liquids associated with decontamination of scrap steel, buildings, and equipment will consist of water and minor amounts of solids; no soap mixtures or cleaners are anticipated for use in wet decontamination at this time. These liquids will be transferred to frac tanks for temporary storage and subsequently used on site as slurry make-up water during MBM processing activities.

7.0 SEQUENCING AND SCHEDULING

The activities proposed in this Demolition Plan are anticipated to require approximately 5 months to complete, excluding preparation of a demolition summary report. Specific project tasks and timelines are summarized in the general project timeline provided on Figure 6.

Contractor demolition permitting and submittals preparation activities will be initiated concurrently with submittal of this Demolition Plan to IEPA. Contractor mobilization to the Site will begin after IEPA approval of this Demolition Plan, but no sooner than May 17, 2010.

8.0 POST-DEMOLITION ACTIVITIES

This section describes briefly the post-demolition reporting activities to be performed at the Site.

Within 45 days of completion of demolition and waste disposal activities and receipt of all disposal records, a completion report will be prepared and submitted to IEPA. As described in Section 5.7, information regarding the RCRA closure documentation associated with the AAF Decontamination Area and Sump will be submitted following the completion and subsequent IEPA inspection of that work. The completion report will also include record drawings that illustrate locations of all terminated utilities, and locations of remaining concrete footings, slabs, or structures left in place within the demolition zone. The completion report will also contain a summary of all waste disposal activities, including tonnage summaries of materials shipped off site along with manifests and/or bills of lading associated with waste disposal activities. Final closure documentation related to the AAF Decontamination Area and Sump will be compiled as a separate submittal but provided along with the completion report.

9.0 REFERENCES

The Bankruptcy Estate of Chemetco, Inc., 2008, RCRA Closure Plan, Brick Shop Container Storage Area, January 29 (Estate, 2008a).

The Bankruptcy Estate of Chemetco, Inc., 2008, RCRA Closure Plan, AAF Decontamination Area and Sump, January 31 (Estate, 2008b).

Geotechnology, Inc., 2009, Environmental Hazards Survey, Former Chemetco Site, 3754 Chemetco Lane, Hartford, Illinois, October 9 (Geotechnology, 2009).

Illinois Environmental Protection Agency, 2007, Letter to Estate of Chemetco, Inc., October 10 (IEPA, 2007).

Illinois Environmental Protection Agency, 2010, Letter to Ms. Laura Grandy, Trustee of Estate of Chemetco, Inc., Re: 1198010003-Madison County, Chemetco, ILD048843809, Log No. C-861-CERT, RCRA Closure, March 3 (IEPA, 2010).

TABLES

TABLES

TABLE 1

RCRA¹ REGULATORY REQUIREMENTS THAT MAY CONSTITUTE ARARS² FOR THE CHEMETCO, INC. FACILITY

Revised May 6, 2010

Former Chemetco Inc. Facility
Chemetco Estate, Hartford, Illinois

Subject	Requirement	Federal/State Regulatory Citations	Description	Potentially ARAR or To Be Considered	Evaluation
Recycled Products	A material is recycled if it is used, reused, or reclaimed (§261.1(c)(7)). A material is reclaimed if it is processed to recover a usable product. Section 261.2(c) designates as solid wastes, material that is recycled in a particular manner including reclamation.	40 Code of Federal Regulations (CFR) §261.1(c)(7) and 261.2(c) 35 Administrative Code (IAC) §721.102/ 35 IAC §726 Subpart C	Illinois Environmental Protection Agency (IEPA) has determined the metal bearing materials (MBM) cannot be classified as a by-product or secondary material exhibiting a characteristic that will be reclaimed and consequently not subject to Subpart C. Based on this decision, the material is classified as a solid waste under §261.2(c) and 35 IAC §721.102.	ARAR for MBM that will be moved and staged at the locations described in the approved Demolition Plan. The material will be staged awaiting on-site reprocessing. While staged, the material will be managed in a manner that prevents reactions that threaten human health or the environment such as production of uncontrolled toxic mists, dust in sufficient quantities to create such an endangerment, or further releases to other media. Given the amount and duration of material already present onsite since the closure of the Facility, and the likely impacts to other media caused by this exposed material, the MBM that will be moved as a part of demolition activities will actually be placed in a more secure environment and not likely to contribute further to existing site contamination.	Applicable to MBM generated/moved as part of demolition activities.
Hazardous waste generation and shipment to an off-site treatment, storage and/or disposal (TSD) facility	Determining whether generated waste is a Resource Conservation Recovery Act (RCRA) hazardous waste	40 CFR §262.11/ 35 IAC §722.111	Requirement to determine at the point of generation whether waste is a RCRA hazardous waste	ARAR for debris: concrete, cardboard; paper; wood; plastic containers, piping, and sheeting; personal protective equipment (PPE); fiberglass siding, and dry wall and soapy decontamination water (if hazardous), refractory brick that is not reused.	Applicable to debris and waste materials that are generated as part of demolition activities.
	Identification of RCRA hazardous waste	40 CFR §§261.2-.9, and 40 CFR Part 261 Subpart B (waste characteristics)/ 35 IAC §721 Subpart B	Requirement for determining if a material is a RCRA solid waste and RCRA hazardous waste, and not excluded from RCRA regulation.	ARAR for debris: concrete, cardboard; paper; wood; plastic containers, piping, and sheeting; PPE; fiberglass siding, and dry wall and soapy decontamination water (if hazardous), refractory brick that is not reused.	Applicable to debris and waste materials that are generated as part of demolition activities.
	Labeling and packaging of RCRA hazardous wastes that will be sent off-site	40 CFR §§262.30-.33/ 35 IAC §722 Subparts C, E, and H	Requirement for RCRA hazardous wastes to be sent offsite to a TSD facility must be properly packaged, labeled and placarded	ARAR for debris: concrete, cardboard; paper; wood; plastic containers, piping, and sheeting; PPE; fiberglass siding, and dry wall and soapy decontamination water (if hazardous), refractory brick that is not reused.	Applicable to debris and waste materials that are generated as part of demolition activities.
Hazardous Materials, including Hazardous Waste, transported off-site	These regulations establish the procedures for identifying, classifying, packaging, labeling, and transporting United States Department of Transportation (USDOT) Hazardous Materials, including Hazardous Wastes, that will be transported off-site	49 CFR §171-179/ 35 IAC §721 and §723 49 CFR 107, 171.1-500	Requirement for determining a substance is a USDOT Hazardous Material, including Hazardous Waste, to be transported off site.	ARAR for packaging, labeling, documenting, loading, and transporting USDOT Hazardous Materials, which includes Hazardous Wastes.	Applicable to MBMs containing lead and cadmium levels that trigger USDOT Hazardous Materials classification being transported off-site for recycling and any Hazardous Wastes being transported off site.

TABLE 1

RCRA¹ REGULATORY REQUIREMENTS THAT MAY CONSTITUTE ARARS² FOR THE CHEMETCO, INC. FACILITY

Revised May 6, 2010

Subject	Requirement	Federal/State Regulatory Citations	Description	Potentially ARAR or To Be Considered	Evaluation
Closure and post-closure standards for hazardous waste management units	General RCRA performance standard for hazardous waste management unit closures	40 CFR §265.111 and 40 CFR §265.114/ 35 IAC §724	Requirement for waste management units that handle RCRA hazardous waste must be closed and receive post-closure care to minimize the need for further maintenance and to control, minimize or eliminate later escape of hazardous constituents to the extent necessary to protect human health and the environment. In addition, equipment, structures and soil that become contaminated from contact with hazardous waste must be properly disposed of or contaminated.	ARAR for the Brick Shop Container Storage Area and the AAF Decontamination Area and Sump	Applicable to any storage, treatment or disposal units that would be used to manage waste materials excavated or otherwise generated.
Container Management	General RCRA requirements for managing containers used to store materials.	40 CFR §265 Subpart I 35 IAC §725 Subpart I	Requirement for the design and management standards for hazardous waste containers	ARAR for the containerization of the residual liquids or pre-existing containerized material within the Foundry Building and Tank House.	Applicable for any hazardous waste that will be containerized.
Occupations exposures to on-site workers	Required prior to working at a hazardous waste site	Occupational Safety and Health Administration (OSHA), 29 USC §651-678	Requirement that regulates worker health and safety. Sets general industry standards for workplace exposure to chemicals, and sets health and safety training requirements for workers at hazardous waste sites.	ARAR	OSHA worker safety standards are independently applicable to hazardous waste sites
		29 CFR Part 1910, Subpart Z	Establishes occupational exposure levels for specific contaminants	ARAR	OSHA worker safety standards are independently applicable to hazardous waste sites
Spent Hydraulic Fluids	Determining whether generated waste is a RCRA hazardous waste	40 CFR §262.11/ 35 IAC § 722.111	Requirement to determine at the point of generation whether waste is a RCRA hazardous waste	ARAR	Applicable to debris and waste materials that are generated as part of demolition activities.
	Identification of RCRA hazardous waste	40 CFR §261.2-.9, and 40 CFR Part 261 Subparts B (waste characteristics)/ 35 IAC § 721 Subpart B	Requirement for determining if a material is a RCRA solid waste and RCRA hazardous waste, and not excluded from RCRA regulation.	ARAR	Applicable to debris and waste materials that are generated as part of demolition activities.
	Labeling and packaging of RCRA hazardous wastes that will be sent off-site	40 CFR §262.30-.33	RCRA hazardous wastes to be sent offsite to a TSD facility must be properly packaged, labeled and placarded	ARAR	Same as above.
Used Oil Standards	Standards for used oil generators	40 CFR §279 Subpart C and IAC §739 Subpart C.	Standards for used oil generators.	ARAR	Applicable to material that can be classified as "Used Oil."

TABLE 1

RCRA¹ REGULATORY REQUIREMENTS THAT MAY CONSTITUTE ARARS² FOR THE CHEMETCO, INC. FACILITY

Revised May 6, 2010

Subject	Requirement	Federal/State Regulatory Citations	Description	Potentially ARAR or To Be Considered	Evaluation
Dust Emissions	Prevention of particulate emissions	Occupational Safety and Health Administration (OSHA) Requirements 29 CFR	Requirement that regulates worker health and safety. Sets general industry standards for workplace exposure to chemicals, and sets health and safety training requirements for workers at hazardous waste sites.	ARAR	OSHA worker safety standards are independently applicable to hazardous waste sites
		29 CFR Part 1910, Subpart Z	Establishes occupational exposure levels for specific contaminants	ARAR	OSHA worker safety standards are independently applicable to hazardous waste sites
Universal Waste	Identification of material that could be classified and/or managed as universal waste	40 CFR §273 Subpart B IAC §733 Subpart B	Requirement to determine at the point of generation whether this waste can be managed as universal waste under the regulations cited and that apply to small quantity generators of universal waste (handler that has less than 11,000 pounds of total universal waste onsite at any one time)	ARAR for batteries, mercury-containing equipment, lamps, paints, various light bulbs, air conditioning units. Small quantity generators are allowed to: (1) accumulate waste 1 year from the date the waste was generated; (2) waste will be stored to prevent releases to the environment; (3) waste will be managed in containers that are appropriately labeled/marked (e.g., "Universal Waste - Batteries, Lamps");	Applicable to demolition activities,
Special Waste	Identification of material that could be classified and/or managed and disposed of as Special Waste	IAC §808.121(a), IAC §808.240	Requirement to determine if material is a Special Waste, classify or declassify the waste, manage waste to be disposed of offsite in a manner to prevent releases to the environment. If classified as a special waste, onsite management and disposal accordingly.	ARAR for demolition waste not sold or recycled, stone, glass, clay and concrete products to be sent for offsite disposal, metallic dust sweepings for offsite disposal, baghouse dust, scrubber sludges if sent offsite for disposal. IAC §808 Subparts C, D, E, F, G, and H will only be complied with as determined with IEPA after the waste is identified and classified, if necessary.	Applicable to demolition activities,
Electronics Waste (i.e., printed circuit boards, computer monitors)	Remove circuit boards from debris piles or other areas that are associated with the demolition and send offsite for shredding and recycling. If encountered in structures that are to be demolished, monitors will be removed and recycled.	40 CFR Section 261.4(b)(14)	Requirements for circuit boards that are exempt from regulation if handled as described. The spent circuit boards that are found in debris piles or other areas associated with the demolition will be removed from the pile/area and sent off for shredding and recycling. If computer monitors are encountered during the demolition process, they will be removed and recycled.	ARAR for circuit board debris and computer monitors.	Applicable to circuit board debris and in-tact monitors
Light Ballasts	Manage light ballasts that may be encountered during demolition as municipal solid waste.	35 IAC §733 Subpart G	The quantity of light ballasts within each building was noted in the Hazardous Building Material Survey prepared by Geotechnology, Inc. Their report assumed that each light ballast identified was polychlorinated biphenyls (PCB)-containing, and the condition of the light ballasts identified were assumed to be intact and non-leaking. Non-leaking PCB light ballasts do not meet the definition of a special waste but are considered a municipal solid waste. Non-leaking PCB light ballasts will be managed as a municipal solid waste following 35 IAC, Subpart G.	ARAR	Applicable to light ballasts encountered during demolition.

TABLE 1

RCRA¹ REGULATORY REQUIREMENTS THAT MAY CONSTITUTE ARARS² FOR THE CHEMETCO, INC. FACILITY

Revised May 6, 2010

Subject	Requirement	Federal/State Regulatory Citations	Description	Potentially ARAR or To Be Considered	Evaluation
Concrete Debris	Concrete debris will be tested to determine on-site use as clean fill.	35 IAC Section §742 Table F	Requirement for concrete debris that will considered for reuse onsite must meet the Tiered Approach Corrective Action Objectives Tier 1 Industrial/Commercial Standard for Soil.	ARAR	Applicable to concrete debris.
Asbestos Containing Material	Asbestos material from demolition activities	OSHA 29 CFR 1926.1101	Requirement for asbestos abatement activities	ARAR	Applicable to asbestos material
Lead-based Paint (LBP)	LBP waste that may be present in demolition/construction debris.	40 CFR §262.11/ 35 IAC §722.111	LBP waste which adheres to the demolition/construction debris may be disposed of in a properly permitted sanitary landfill or sent to a facility that has a permit issued by the state to accept non-hazardous waste for storage or treatment.	If demolition/construction debris containing LBP still adhered to the substrate is generated during demolition, the waste may be handled as general refuse. However, if the LBP is removed from the original substrate to which it was adhered, then the waste is a special waste. The waste must also be tested to determine if it is a hazardous waste. The entire waste stream (e.g., paint chips, blasting grit with paint chips, stripping agent with paint chips) must be analyzed. LBP waste that meets the definition of special waste is hazardous if it has a concentration of lead equal to or greater than 5.0 milligrams per liter as determined by the Toxicity Characteristic Leaching Procedure. In addition, other parameters must be below the regulatory limits for toxicity and other characteristics and listings. The handling and disposal of hazardous waste in Illinois must be conducted in accordance with the RCRA regulations applicable to the activity being conducted.	Applicable to demolition debris that may contain LBP.

Notes:

1. RCRA = Resource Conservation and Recovery Act.
2. ARARs = Applicable or Relevant and Appropriate Requirements.

TABLE 2

DEBRIS HANDLING MATRIX

Former Chemetco Inc. Facility
Chemetco Estate, Hartford, Illinois

Revised May 6, 2010

Material Category	Type/Composition	Proposed Decontamination Methodology ¹	Proposed Recycle Methodology ²	Shipping Method	Receiving Facility Type
Wood	pallets, plywood, dimensional lumber scraps, furniture	N/A ³	Source Separation	Roll-off Bin	Construction and Demolition Debris Landfill (Solid Waste)
Building Debris	drywall, wood studs, cinder blocks, siding and roofing material	N/A	Mixed Material Collection	End Dump Truck	Construction and Demolition Debris Landfill (Solid Waste)
Plastic	pipe scraps, plastic containers, corrugated fiberglass siding, rubber hose scraps	N/A	Source Separation	Roll-off Bin	Construction and Demolition Debris Landfill (Solid Waste)
Electronics	computer monitors, circuit boards	N/A	Source Separation	Roll-off Bin	Recycling and Shredding
Paper, Cardboard	cardboard boxes	N/A	Mixed Material Collection	Roll-off Bin	Hazardous Waste Landfill
Concrete	rubble and debris	None	On-site Crushing	N/A	Rubble that meets the Tier 1 Tiered Approach Corrective Action Objectives standards may be reused onsite. Concrete rubble that does not meet the standard or is not intended to be reused will be shipped offsite to a solid waste landfill.
Stainless Steel	American Air Filter ductwork	A, B	Source Separation	End Dump Truck	Metal Recycling Facility
Scrap Metal	steel scrap, steel plates, piping, building siding tin, angle iron, channel, heavy equipment scrap, engines, copper wire, steel wire	A, B	Source Separation	Roll-off Bin	Metal Recycling Facility

Notes:

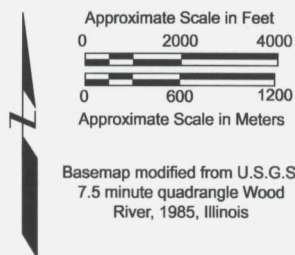
- Decontamination Methodologies:
A: Gross decontamination (broom sweeping, brushing as applicable).
B: Wet Decontamination - (high pressure wash, liquids collection).
- Recycle Methodologies (per Illinois Environmental Protection Agency Construction and Demolition Debris Guidance, www.epa.state.il.us/small-business/construction-debris/).
Mixed Material Collection: Recycle materials are transported from the site, sorted at a designated facility, and sent to processors for recycling.
Source Separation: Similar materials are separated from other wastes at the site by category and sent to processors for recycling.
On-site processing: Recyclable materials are processed on site and made ready for reuse.
- N/A = not applicable.

FIGURES

FIGURES

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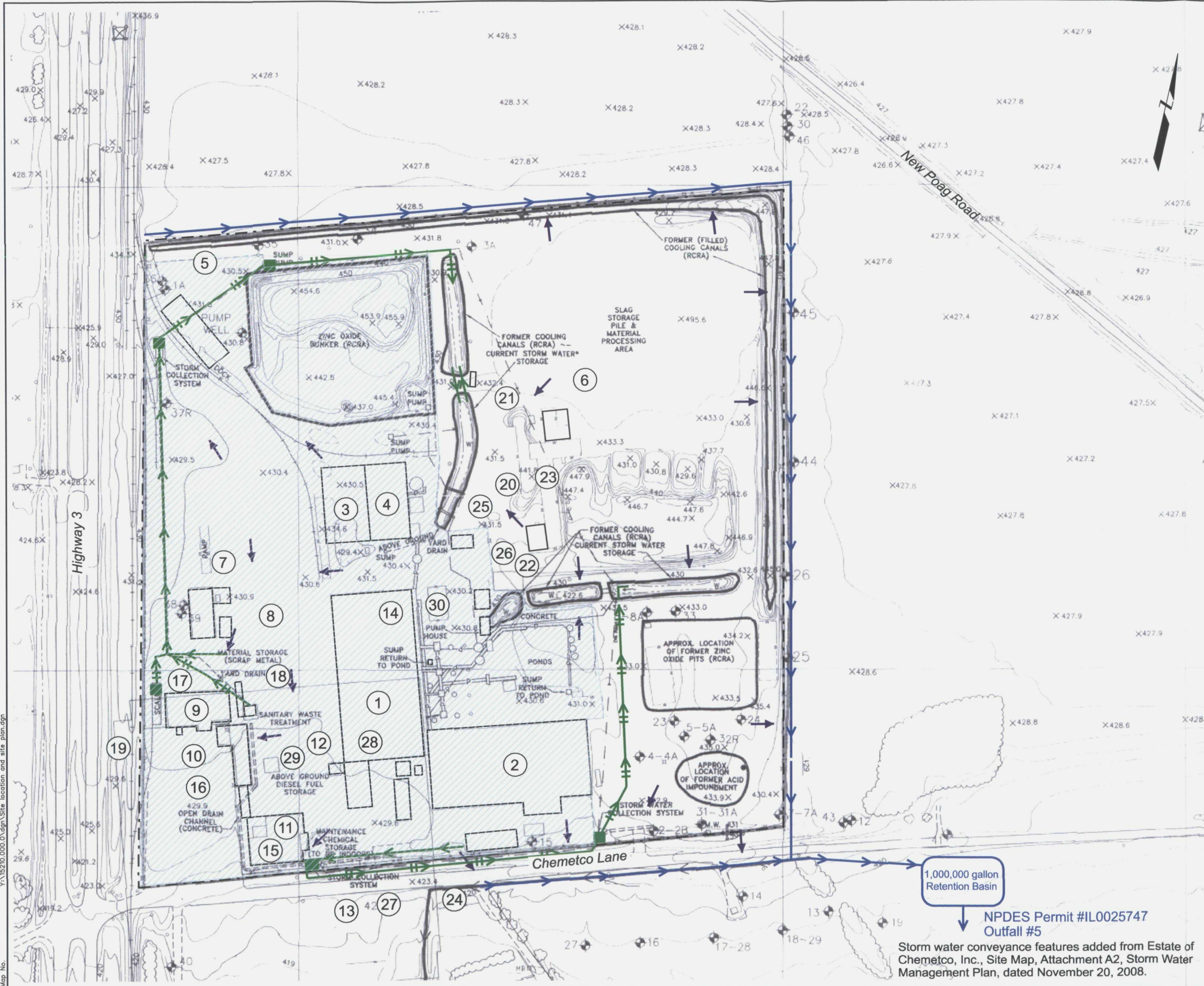


SITE LOCATION MAP
Former Chemetco Site
3754 Chemetco Lane
Hartford, Illinois

By: pah	Date: 05/06/10	Project No: 15210
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AMEC Geomatrix

Figure 1



Explanation

- Monitoring well location
- Site boundary
- Paved surface
- Storm water conveyance - gravity drained
- Storm water conveyance - mechanical pumped
- Storm water conveyance - surface flow
- Perimeter off-site system
- Storm water collection sump with transfer pump

Building Legend

No.	Description
1	Foundry
2	Tank House
3	Dome Buildings
4	DIS Building
5	Fines Building
6	Granulation Plant
7	Receiving Building
8	Laboratory
9	Commercial Offices
10	Plant Offices
11	Mobile Shop
12	Brick Shop/MFC Pilot Plant
13	Foundry Baghouse
14	AAF
15	Parts Storage Building
16	Laborer's Lunch Trailer
17	Shower Trailer
18	Sewage Treatment
19	Scale Office
20	Granulation Pump House
21	Granulation Trailer
22	Main Pump House
23	Barge Area
24	Motor Storage Building
25	North Cooling Tower
26	South Cooling Tower
27	Restroom
28	Baghouse Control Room
29	Bailer Room Hydraulics
30	Ameren Electrical Substation

Approximate Scale in Feet

0 100 200

Approximate Scale in Meters

0 30 60

Basemap modified from Sheppard Morgan & Schwab, Inc., Site Drainage Map in Sections 15 and 16, Chouteau Township, Madison County, Illinois, dated September 1997.

EXISTING STORM WATER MANAGEMENT PLAN

Former Chemetco Site
3754 Chemetco Lane
Hartford, Illinois

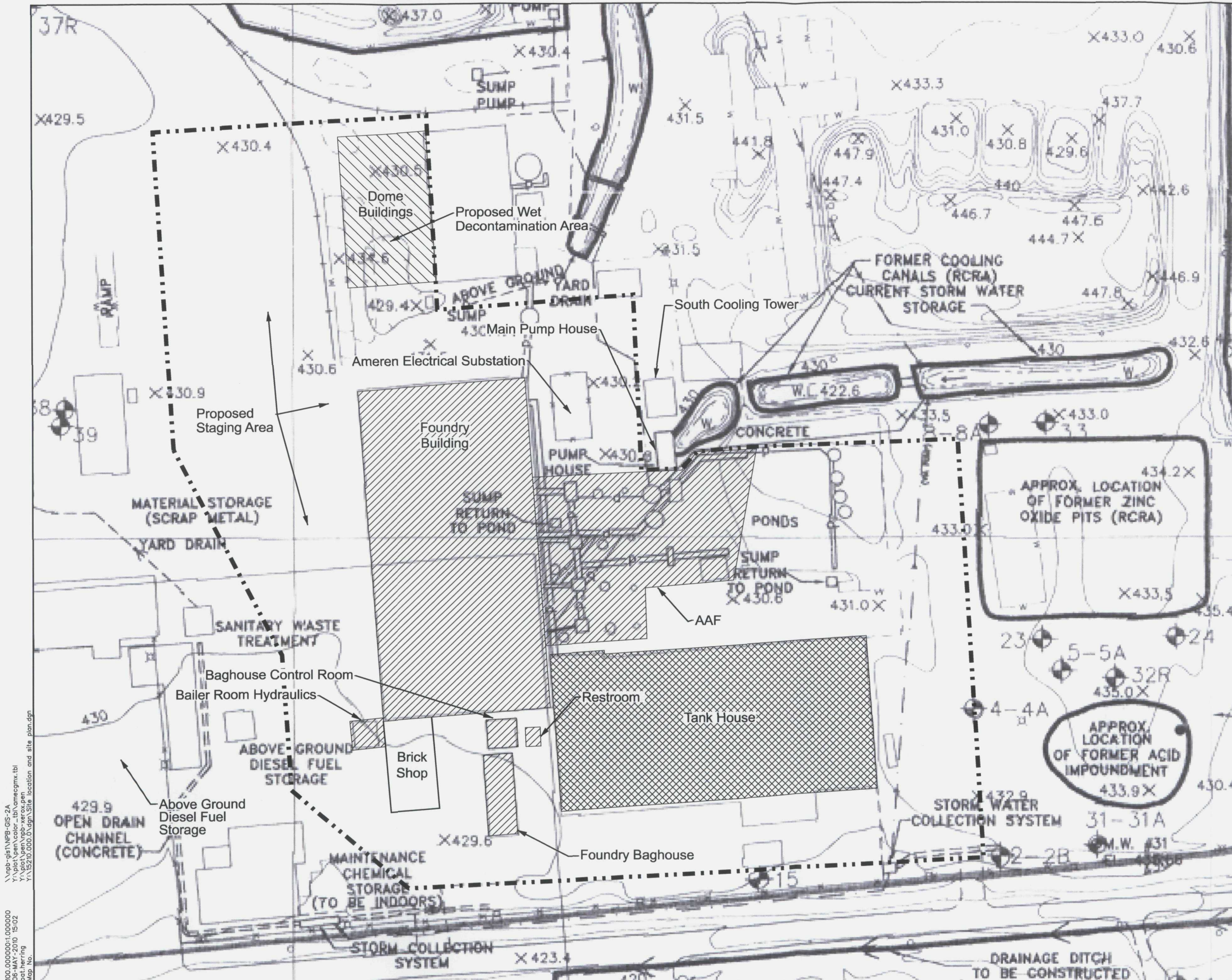
NPDES Permit #IL0025747
Outfall #5

Storm water conveyance features added from Estate of Chemetco, Inc., Site Map, Attachment A2, Storm Water Management Plan, dated November 20, 2008.

By: pah	Date: 05/06/10	Project No: 15210
---------	----------------	-------------------

AMEC Geomatrix

Figure 3



Explanation

- ◆ Monitoring well location
- Demolish structure to slab grade
- Demolish building interior; structure to remain
- Demolish roof only
- - - Proposed demolition work zone; actual demolition work zone to be demarcated in the field



Approximate Scale in Feet
 0 50 100
 0 15 30
 Approximate Scale in Meters

Basemap modified from Sheppard Morgan & Schwab, Inc., Site Drainage Map in Sections 15 and 16, Chouteau Township, Madison County, Illinois, dated September 1997.

PROPOSED DEMOLITION PLAN Former Chemetco Site 3754 Chemetco Lane Hartford, Illinois

By: pah Date: 05/06/10 Project No: 15210

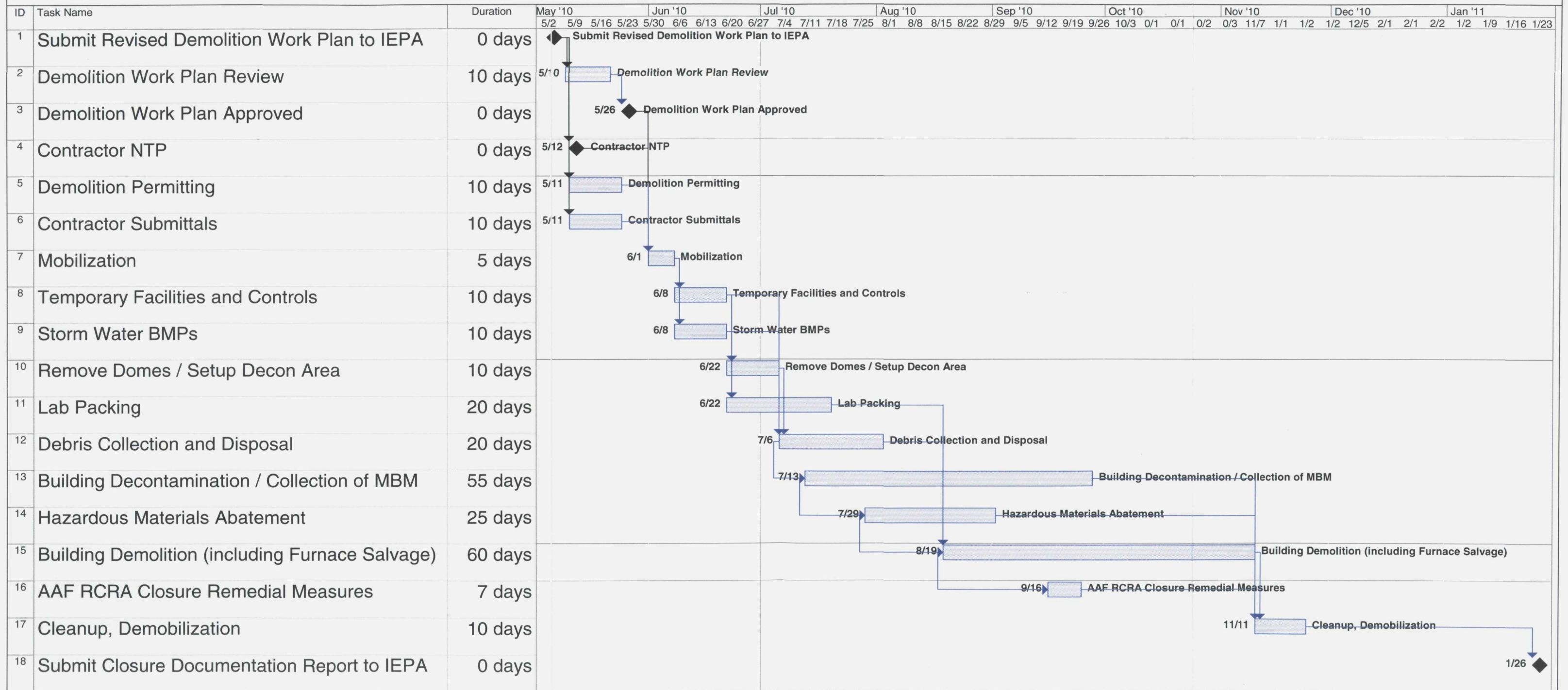
AMEC Geomatrix

Figure 4

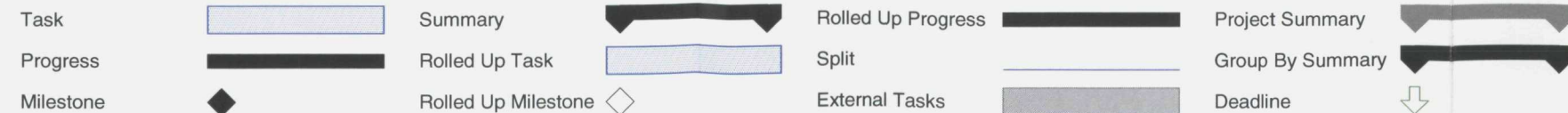
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Figure 6

Proposed Estimated Schedule Revised Final Demolition Plan



Project: Former Chemetco Building Demolition
Date: May 5, 2010





Transmittal

Sent Via: ☐ Messenger ☐ U.S. Mail ☒ Overnight Mail

Date: May 6, 2010
To: Erin Rednour
Illinois EPA
1021 North Grand Ave., East
Springfield, Illinois 62702
From: Bryan Stone, Senior Engineer
AMEC Geomatrix, Inc.
cc: (See names on next page)

Project Number: 15210.000
Project Name: Former Chemetco Inc., Facility

Item	Description
1	(3 copies) "Revised Final Demolition Plan, Former Foundry and Tank House Buildings and American Air Filter System, Former Chemetco, Inc. Facility, Chemetco Estate, Hartford, Illinois"

Remarks

Enclosed please find three (3) copies of the above-mentioned report. If you have questions, please call.

Enclosure

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AMEC Geomatrix



Transmittal

Page 2

Date: May 6, 2010

From: Bryan Stone, Senior Engineer

To: Erin Rednour

AMEC Geomatrix, Inc.

Illinois EPA

1021 North Grand Ave., East

Springfield, Illinois 62702

Copy to:

Ms. Michelle Kerr, U.S. EPA Region 5

Mr. Chris Cahnovsky, Illinois EPA

Mr. James Lee Morgan, Office of Attorney General

Mr. Tom Martin, U.S. EPA Region 5

Mr. Elliot G. Stegin, Paradigm Minerals & Environmental Services

Mr. Gary J. Davis, Chemetco Estate

Mr. Donald Samson, Trustee

Ms. Penni S. Livingston, Livingston Law Firm

Mr. James Kropid

Mr. Gregory L. Sukys, U.S. Department of Justice

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